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KEY NOTES
OF
BACTERIOLOGY

With a Synopsis of
OUR NEWER REMEDIES

BY
The Same Author

TENTH EDITION

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DIAGNOSIS.

A PHYSICIAN, when consulted by a patient, is naturally enough expected to be an attentive listener to what, to his informed mind, is a strange medley and most confused account of those deviations from health or actual sufferings by which the patient has been driven to seek aid. The more serious symptoms are often lightly touched upon, the more trivial exaggerated, and the whole jumbled together without logical sequence or the slightest attempt at orderly arrangement. This story, trying as it is to the physician, and all the more trying the more his own mind is duly trained, he ought to listen to; for this the patient expects, and perhaps has a right to expect. During the tedious narration it may give him patience to bear in mind two considerations: first, that from it he must obtain the right end of the clue which is to guide him in the difficult task of ascertaining the nature, extent, and seat of the disease; and second, that by this often most prolix narrative, taken along with his attitude, manner, and expression, the patient, absorbed in his own sufferings, is giving his physician, if he is careful and observant, the best opportunity of becoming acquainted with the *ego* with whom he has to deal.

The most critical examination of symptoms, the most careful inquiry into the state of internal organs, the most logical deductions from these as to the morbid changes from which they have originated, will often be erroneous unless the physician is also a student of human nature, and is able to arrive almost intuitively at some knowledge of the mental characteristics and peculiarities of his patient.

But sooner or later, and more often later than sooner, the patient will have arrived at the end of his narration, and then the physician must unravel for himself this tangled web; and, taking the different threads, he must follow them up, and by means of close physical examination ascertain the condition of the various organs of the body—particularly those which the train of symptoms detailed indicates to be implicated in the morbid process. It is only by a methodical examination of the different systems of the body that a satisfactory view of the condition of the patient can be obtained, and the very foundation of rational treatment laid.

HOW TO RECOGNIZE DISEASE.

In order to do this with certainty, the patient should be examined according to a well-defined plan or order. The name, age, occupation, residence, temperament, previous history, sex, should be carefully noted, and then inspection, palpation, measurement, percussion, auscultation, pulse, tongue, skin, secretions, excretions, heart, respirations, etc., carefully noted. All interrogations should be put to the patient in plain language such as he can readily comprehend, in systematic order, so as to arrive at a precise knowledge as to what kind or nature of deviation from health has taken place; and, above all, in our examinations and manipulations we should never forget that we are learning the disease of a fellow-creature like ourselves, who possesses the same feelings and sensibilities. Prudence, delicacy and kindness should therefore guide our movements. The consulting-room of a physician should be as sacred as the confessional, never degraded into an engine of terror or extortion. There should be the strictest honesty of purpose, conduct pure and exalted, and everything called by its proper name, never overstated, never condescending to anything ignoble, never coining names for trifling maladies, or aggravating the type of a disease. Patients should not be maltreated by endless examinations, speculations, applications, and by drugging for years when nothing is the matter.

Disease is best studied between fifteen and forty-five. Diagnosis during that period is much aided by stability, perfect ossification, pulse, respirations, heart being steady and all the functions of the body up to a healthy standard.

INSPECTION.

Inspection of the general position of the patient in repose and in motion is often very suggestive. The position and attitude in fever and inflammation, in paralysis, hydrothorax, asthma, colic, and spasmodic diseases are highly characteristic. The recumbent posture on back indicates debility; quick forcible changes indicate excitement of the nervous system, while fixed or restrained movement is dependent on paralysis or inflammation.

Inspection of the countenance is of great importance, observing whether sadness, peevishness, despair, fear, joy, grief, or other emotional condition is evinced. The yellow color of the skin in jaundice, its uriniferous aspect in Bright's disease, speak volumes; whereas its conformation tells us much, as the corrugation of the brows in pain of the head. Pain in the chest causes the nostrils to be drawn upward; in the abdomen the lips to be raised and stretched over the gums and teeth.

Inspection of the chest refers to the form and configuration of the entire thorax and its various parts, and a careful comparison of the two sides, whether in motion or at rest. The motions of

the chest are referable to inspiration and expiration, which pass imperceptibly into each other. In disease these motions are altered in various ways. First, by excess or diminution, as in asthma and laryngeal obstruction. Second, by partial immobility as in pleurisy, or by augmented expansion as in pneumonia and pleurisy. Third, by increased rapidity as in pericarditis, or unusual slowness as in coma.

Inspection of the abdomen is no less important than that of the chest. In health it is slightly convex, marked by elevations and depression corresponding to the muscles of its walls, the umbilicus, and prominences of the viscera below. It varies with age and sex: smooth and flat in the young; broader inferiorly in females than in males, from the greater width of the pelvis. In disease it may be enlarged generally and symmetrically, as in dropsies; partially or irregularly in ovarian, hepatic, splenic, and other diseases; it may be retracted from emaciation or intestinal obstruction. The respiratory movements of the abdomen bear a certain relation to those of the chest, and are increased or arrested with them. In pleurisy the respiratory movements are mostly abdominal; in peritonitis altogether thoracic. Disturbed relations of the respiratory movements of both abdomen and thorax are useful points in diagnosis in hydrothorax, asthma, ascites, abdominal tumors, etc.

PALPATION.

This is a valuable mode of examination, and is best practiced by simply pressing the tips of the fingers against the various parts. In some cases the whole hand or both hands are used. The most favorable position for palpation is the horizontal or erect. The information that palpation gives is: First, increased or diminished sensibility. Second, the altered form or shape, size, density, elasticity, etc., of the parts under examination. Third, the different kinds of movements to which they are subjected. Pain, if inflammatory, is increased on pressure; if neuralgic, it is relieved. In paralysis, the diminution of sensibility can only be ascertained by feeling the part, and the limitation of the anæsthesia is best arrived at by pricking the surface. Alterations in size, form, density are often made out by palpation; a change in elasticity, hypertrophy, or atrophy is also easily discoverable. Certain motions, as expansion, contraction, vibrations, frictions, grating, crepitation, are also determined by palpation. The natural fremitus or thrill perceptible on placing the hand on the chest when a person speaks, is increased or diminished in disease. Fluctuation is a sensation caused by tapping on or percussing parts in such a way as to cause an agitation or wave of their fluid contents.

MENSURATION.

This is another valuable mode of examination, and consists in measuring the distance between any two points by a graduated tape. For measuring either side of the chest or abdomen, a spinous process of the vertebræ should be selected as a fixed point, and the middle of the sternum or umbilicus for the other. The exact level of the measurement should be carefully noted and an allowance of from one and a half to two and a half inches made for the right side, or for the left if a left-handed individual, and in case of a blacksmith even a little more. The pressure of the corsets in ladies enlarges the thoracic but diminishes the abdominal movements. In ascertaining the circular measurement of the chest and abdomen, the moment should be selected when the patient holds his breath at the time of an ordinary expiration, care being taken that the tape is carried evenly round the body.

Mensuration is valuable in detecting emphysema when the ribs bulge out; in hypertrophy of the heart; when the lungs are eaten away in phthisis; in enlargement of liver, spleen, and ovaries.

PERCUSSION.

Percussion is best performed by spreading the fingers of the left hand not too widely apart transversely across the ribs and tapping on them with the right,—the bare hand on the naked chest or some very thin intervening body, the patient either sitting or in the recumbent posture. The object is to ascertain the resistance and size of organs. The sounds elicited by percussion or beating arise from the vibrations occasioned in the solid texture of the organs percussed. The different density and elasticity of organs modify the number and continuance of the vibrations, and give rise to different sounds. For the sake of simplicity all the sound obtained by percussion may be embraced under three heads, and these three sounds are dependent on the organs containing air, or on their containing fluid, or on their being formed out of dense solid tissue. These sounds or tones may be termed the *resonant*, *humoral*, and *parenchymatous*; resonant over organs that contain air, humoral over organs that contain water, and a dull flat sound over solid organs. To become thoroughly familiar with these three sounds takes a little time and close attention. The sense of resistance is an important consideration in percussion; it bears a relation to the density of the object struck; thus firm and solid organs or textures suffer more resistance than the soft or elastic ones. The ribs and entire thorax of a child are very elastic; those of an adult when ossification is complete very unyielding.

Before percussing a person affected with disease, the operator should have a clear and accurate knowledge of the limits and

intensity of clearness or resonance, or of dullness of the entire thoracic and abdominal viscera. For example, the lungs from top to bottom on both sides are resonant on percussion in health, reserving four square inches of dullness on the left side below the nipple for the heart and a variation at the base of the right lung for an enlarged liver, and of the left for an enlarged spleen, of an inch or more from the verge of the ribs. Over a healthy lung, then, there is perfect resonance; but suppose the lungs are invaded by tubercle, this diseased germ like all others selects the weakest parts for its deposit and growth, which in ordinary cases is the apex of the lung, or the apexes of both lungs, depositing itself at the uppermost point and growing and being deposited from above downwards. In such a case there would be dullness more or less, and the intercostal movement of the ribs would be arrested. There is one exception to the above: if the patient was suffering from irritation of the liver, the branches of the eighth-pair of nerves that cover the upper lobe of the right lung might be so weakened as to permit passive congestion, and the dullness on percussion would be found. This only happens when the integrity of that nerve is weakened and all the blood-vessels it supplies thereby relaxed. There is scarcely any stage of deposit of tubercle in the apexes of the lung that fails to be detected by percussion; whereas when inflammation takes place it almost invariably begins in the large aerating surface of the lower lobe of the right, which is abundantly supplied with the sympathetic nerve, and it may proceed up the same lung or pass over to the left. Perhaps the only exception to the rule of dullness at the base would be in the closing stage of melituria or diabetes, when tubercle is thrown out at the base. As a general rule, then, congestive consolidation, the result of inflammation, begins at base. In some cases of tuberculosis, right in the centre of a lobe weakened by some irritation there may be an encysted mass of tubercle as large as or even larger than the closed fist, and both apex and base clear on percussion. This mass may remain or it may die and be expectorated, leaving a chasm or cavity or cavern in the lung, in which an undue resonance can be detected and mapped out. An undue resonance or a tympanitic sound may then be due to a cavity left vacant by expectorated tubercle, or it may be due to a dilatation of the air cells into pouches, or to infiltration of air at the abrupt angles or corners of the lung which is present in emphysema. A lobe or an entire lung may ulcerate away in consumption, giving rise to this sound on percussion, in which case there would naturally be a collapse of the ribs, whereas in emphysema there would be more of a bulging.

Water may be effused into the cavity of the chest, the result of pleurisy, an obstruction about the heart, and can be readily ascertained by first percussing the chest of the patient when

lying down, in which position the water, if there is any, in the cavity of the chest will gravitate to the back and the lungs will float, when the chest will be found clear from the top to bottom; then sitting up, the dullness, if there is water, can be detected and its height marked.

The diagnosis of affections of the heart constitutes the most difficult in the art of medicine. Any increase or diminution in size can be readily appreciated and detected. Its size varies with the individual; four square inches or the size of the closed fist is reckoned normal, but in effusions from the pericardium which are so common in chronic rheumatism, the area of dullness is increased to a greater or less extent.

In hypertrophy there is often a vast increase, so much so that dullness is great; there is a bulging to a considerable extent. In percussing the solid organs like the liver, great care is necessary to carefully map out its boundaries; the superior margin is generally found from one to two inches above the margin of the ribs, while its inferior boundaries extend to a considerable distance. Variations in the size of the liver are great in our climate, extending from simple congestion, inflammation, induration, enlargement, abscess, hydatids, tumors, down to wasting or atrophy, and all can often be detected by percussion. In aggravated jaundice, as a symptom of organic disease of the liver, the increase or diminution in size of the organ will bear a proportion to the disease. If the gall bladder is distended by bile or gall-stones, it is easily detected by percussion, and the dullness under the inferior margin of the liver, anteriorly and somewhat laterally, may be marked out. The size of the spleen is four inches long and three inches wide. In diseased states it is either enlarged or atrophied. In percussing this organ the patient should be on the right side. The sounds elicited on percussion of the stomach, bowels, bladder, are of great value in determining the size and position of other organs, as liver and spleen, also in locating tumors, and effusion of fluids. In dropsy of the abdomen the swelling is equable. On percussing the abdomen with fingers of the right hand with the fingers spread of the left, their points resting on the opposite side of the abdomen, patient standing, a wave, undulation or fluctuation, can be detected very easily, and if not satisfactory empty the bowels with oil, and put the patient in a recumbent posture; bowels being empty will float on the top of the water, as the water has gravitated to the back; then the standing posture should be again tried. A correct appreciation of the state of the bladder is also obtained by percussion. In percussing the kidneys turn patient over flat on the abdomen, so as to get a clear appreciation of the renal organs.

AUSCULTATION.

This consists in applying the ear either directly or through a stethoscope to the chest, abdomen, or other parts of the body, to

listen to sounds or murmurs. Its object is to ascertain and appreciate sounds and their nature, and its utility is limited to the pulmonary and circulatory organs. Before resorting to this method of diagnosis, it is well to refresh the memory with what exists in health. If we place the ear over the larynx and trachea of a healthy adult male, we hear two sounds or noises, one accompanying inspiration, the other expiration: they are called the laryngeal and tracheal sounds or murmurs. Move the ear to the right or left of the sternum, and you will hear the same sounds, only diminished in intensity; these are now called the bronchial sounds or murmurs. Place the ear under the nipple of the right side and two fine murmurs will be detected, normal vesicular respiratory murmurs. Keep the ear at the same place and cause the patient to count one, two, three, and so on, and there will be a peculiar impetus or sound of the voice called *pectoriloquy* or *bronchophony*.

With regard to these healthy sounds, it must be borne in mind that vocal resonance originates in the larynx and diminishes or increases from the point or source of the sound, modified by the textures in transmitting it. In all morbid states of the lungs these natural sounds are altered and new or abnormal sounds are developed. The alterations of the natural sounds in diseased conditions may consist in their being increased, diminished, absent, or location changed; the most common change is in intensity, often stronger or weaker, indicating increased or diminished action. They may be altered in character, the sounds becoming harsh as in pneumonia, cavernous when a cavern exists in the lung in consumption, amphoric in pneumothorax. There may be also an alteration in position; that is, sounds which are natural to certain parts of the chest are heard distinctly at other places, whereas in health they are never detected. For instance, in pneumonia, bronchial or tubular breathing may be evident when only a vesicular murmur ought to exist.

The inspiration in health is three times as long as the expiration, but in certain diseased conditions this relation is altered or inverted. For all practical purposes all the abnormal sounds may be classed under three heads: First, rubbing or friction sounds. Second, moist rattles. Third, vibrating murmurs.

Besides these there may be whistling, blowing, cooing, rasping and other rales or rattles caused by different impediments, mechanical obstruction.

1. Rubbing or Friction Sound.—This is caused by an irritation, inflammation, an effusion of serum in serous membranes which elevates the membrane into little blebs or blisters the size of a pin-point or head of a pin. It is a condition that we find after death an irritation of the membranes of the brain, peritoneum, pericardium, and pleura. In acute pleurisy about four or five days from rigor it can be very distinctly heard immediately over

the site or location of the stitch or catch. On putting the ear to the place, we hear a rubbing like two pieces of brown paper being rubbed against each other. In health the pleura of the lungs and the pleura of the ribs are smooth, silky, finely lubricated; but when a partial death takes place this effusion occurs with other symptoms of inflammation: they become dry, rasping, grating, and we may hear any degree of friction noise. The sound may be altered in various ways; the stage of inflammation modifies it greatly. Although most distinct in pleurisy, we also hear it very finely in all forms of pericarditis.

2. Moist Rattles.—When serum or mucus, or muco-purulent matter, or liquor sanguinis, or blood is effused into the bronchi, the air in the act of inspiration and expiration is forced down and then up through them, which causes a bubbling or rattling or crepitating which can be distinctly heard by the ear and often felt by the hand. A large number of names are applied to this, but in all cases there must be a fluid to the moist rattle, so fine in some cases as to be scarcely audible (crepitating), so coarse as to resemble a gurgling or splashing (cavernous); and between these two grades medical experts enumerate a large number of rales or rattles as mucous, sub-mucous, sub-crepitating. For all practical purposes, just adhere to the term moist rattles. These are present in bronchitis, pneumonia, phthisis.

3. Dry, Vibrating Murmur.—The wheezing or vibrating murmur is chiefly brought about by the irritation of the nerves that supply the circular muscular fibres of the bronchi, causing a contraction. We have excellent examples in asthma, whooping cough, and emphysema, and in some cardiac diseases. There is a true condition of spasm, obstruction, loss of tone and elasticity in the bronchi, whereby the vibrations into which they are thrown by the column of air produce tones of an abnormal character. The murmur is usually dry, and the fineness or coarseness of the sound will depend on the calibre of the tube or tubes of cavity thrown into vibration. Murmurs may exist from a fine squeaking to a hoarse snoring.

THE HEART IN HEALTH AND DISEASE.

In placing the ear to the heart, we should pay attention to the impulse, to the character and rhythm of the sounds, to the place they are heard loudest, and the direction in which they are propagated.

First find the spot where the apex of the heart beats or strikes against the walls of the chest, then listen to the sounds; place the ear two and one-half inches above, a little inward, and listen to the sounds there; in the first position, where the apex strikes the chest we have the systolic sound, and two and one-half inches above the diastolic sound.

There are two sounds, then, heard over the region of the heart. The first is dull, deep, more prolonged than the second, coincides with the shock of the apex of the heart against the thorax and immediately precedes the radial pulse; it has its maximum intensity over the apex of the heart below and inside of left nipple. The second sound is sharper, shorter, more superficial, has its maximum of intensity two and one half inches above the other, and there is a gurgle in it. These sounds have received the names, systolic (contraction), and diastolic (dilatation), the former when the apex strikes the ribs in contracting, the other in opening to receive the blood. The two sounds are repeated in couples. First, there is the long dull sound, coinciding with the contraction of the heart. Second, there is a pause. Third, the short, sharp sound. Fourth, a longer pause; all of which correspond to one pulsation.

With the systolic (contraction) sound we have the striking of the apex against the chest-walls, then contraction of the ventricles, then rushing of the blood through the aortic orifices, followed by flapping of the auriculo-ventricular valves.

With the diastolic (dilating) sound, we have the rushing of the blood through the auriculo-ventricular valves and flapping together of the aortic valves.

In disease, there may be a modification of the sounds heard in health, or there may be new and abnormal sounds developed. The modifications of healthy sounds are variations in their seat, intensity, extent, character and rhythm.

For example, the sounds may be heard at their maximum intensity lower than the natural point in cases of dilated hypertrophy of the left ventricle, enlargement of the auricles, or tumors at the base depressing the organ. They may be higher, owing to some abnormal swelling, or more on one side than another by effusions of air or fluid into the pleural cavity, or tumors, aneurisms, deformity.

The intensity and extent of the sounds may be diminished in atrophy, in fatty heart, nervous insufficiency—when there is a pericardial effusion, concentric atrophy of left ventricle, or emphysema. The intensity and extent of the sounds are increased in cases of dilated hypertrophy, nervous palpitation, or when the adjacent parts of the lung are indurated by effusion in inflammation or tubercular deposit in phthisis. The character of the sounds may be clearer or duller than in health, according as the walls of the heart are thinner or thicker. The sounds are muffled in cases where effusion has taken place into the pericardium. Sometimes they are rough due to inflammatory changes.

The frequency of pulsations varies in different affections. In certain diseased conditions the beats may be intermittent, or there may be pauses, or they may be irregular. There may be a

variation in sound, an insufficiency of action, in other cases it may be irregular. There may be a variation in sound: a want of harmony in the occurrence of the two sounds, one faint the other tumultuous.

All the diseased sounds of the heart may be classed under two heads. First, friction murmurs. Second, blowing or vibrating murmurs. The friction-sounds are due to inflammation. The vibrating murmurs depend on some organic change, generally the result of inflammation. These murmurs vary in character from a general blowing or puff as if from the nozzle of a bellows (bellows murmur), while others are harsher, grating, or sawing, but all caused by diseased condition of the valves. Sometimes the valves do not close, and as a result the blood regurgitates through them; in some cases the valves are constricted, shriveled, indurated, roughened, calcareous. The diseased sounds may be single or double, and have their origin either in the auriculo-ventricular or arterial valves, or in both. These sounds often resemble musical notes; more or less resembling the cooing of a dove, singing, whistling; all depending upon some excessive narrowing of the orifices, perforation of the valves, irregularities in their margins, or exudations or deposits on their surface.

Not infrequently a soft systolic blowing is audible at the base of the heart, or over the carotids and deep jugular vein; sometimes it is continuous, resembling the humming of a top. These murmurs, which are so common in poor blood, are easily distinguished from valvular ones by being systolic, by their softness, and by their presence when the substance of the heart is imperfectly nourished. On listening over the arteries in the vicinity of the heart, the same sounds can be detected.

In peritonitis, the friction sound is often heard, and sometimes a grating. Various sounds are heard in the bowels, etc.

Auscultation, percussion, and other means of diagnosis are not to be depended on alone; they are simply aids, modes, or means of reaching an end, and should be strengthened by observation of the pulse, tongue, skin, heat, temperament, urine, and other means of a definite character.

THE PULSE.

The pulse at birth averages 130 per minute. There is a gradual decline till puberty, when it reaches its permanent standard, from 75 to 80. From fifty-five years of age upwards there is a gradual decline, so that in old age it ranges about 60. In persons of a sanguine temperament it is about five or six faster than the bilious. In females it averages ten beats more than in males. The recumbent posture causes a lowering of the pulse of about eight or more beats per minute. The pulse being the sign of this or that disease, is also the sign of

non-existence of special activities, of strength and weakness, of irritation and relaxation of certain tissues. The more frequent the pulse, the greater the heat; the more rapid the respiration, the greater microbial evolution (ptomaines) excretion, the weaker the patient.

Frequency is the characteristic of all fevers and inflammations.

In acute rheumatism, frequent but remarkably full.

In all acute inflammatory diseases, firm.

In all abdominal inflammations, small, wiry, and frequent.

In fevers proper, large and soft, or small and feeble, but frequent.

In aortic regurgitation, hammering.

In hemorrhage, jerking.

In old age and in all conditions of arterial degeneration, hard and incompressible.

In excitement, rapidity and shortness of stroke.

In all acute inflammations of the brain, remarkable for its great frequency.

In cerebral disease, very unequal and depressed.

If there is pressure on the brain, slow and labored.

In disease of the heart, irregular.

In aortic regurgitation, although hammering, it is remarkably faint and feeble.

In syncope and cholera, imperceptible.

In all conditions of prostration, more or less faint. Scarcely perceptible in great exhaustion.

A full pulse may be due to one of three factors: powerful ventricular contractions, loss of elasticity of the arterial wall, and interference with the blood flow from the arteries into the capillaries.

The pulse wave propagated from the heart, outwards towards the periphery, may not arrive at the two wrists synchronously, due to aneurisms of the aortic arch.

The character of the pulse varies in different ways. It will be sufficient for ordinary purposes to notice the following points: The expansion of the pulse, a pulse which reaches its full expansion quickly, and as rapidly collapses again, giving to the finger a very quick stroke, aortic incompetence. The opposite condition, the *pulsus tardus*, is distinguished by the slow manner in which the artery fills and empties, and this sluggishness may be due to slowness in the contractions of the heart, to a hindrance in the capillary and venous circulation, to a loss of elasticity in the arterial wall itself, generally met with in arterial sclerosis.

When disease affects origin of subclavian, pulse only found on one side.

In all conditions of depressed vital force, frequent, unless there exists some mechanical impediment, like emphysema.

Pauses in the pulse, or an intermittent pulse, depend either upon disease of the brain or heart.

Pauses in the pulse, still not quite intermitting, are often present in the users of tobacco, the nicotine affecting base of the brain.

THE TONGUE.

The tongue is an excellent index of the state of the stomach and bowels; it often indicates the state of blood and brain. A map of the empire of diseases, its form varies much in shape. Swollen in inflammation or from the germs of variola, scarlet-fever, abuse of mercury.

The motor innervation of the tongue is through the hyper-glossal nerve, spasms of the tongue present in chorea, eclampsia, epilepsy.

A heavy white coat, with or without elevated papillæ, gastric derangement.

A brown coat in centre and white at sides, derangement of stomach and liver.

A very dark brown, gingerbread, or even a licorice aspect, malignant bilious fever, or typhus.

A charcoal hue at root indicates blood-poisoning.

A fur on tongue, catarrh of the stomach.

Transverse fissures on the tongue, intestinal irritation.

Longitudinal tracks, irritation of the kidneys.

Sharp pointed tongue, nervous irritation.

A large flabby tongue, glandular disease.

A smooth raw-beef tongue, acute inflammation of the stomach.

Red tip and edges, sharp-pointed, with white coat, or fur or other coat in centre, chronic inflammation of the stomach.

A large, flabby, tremulous, creamy tongue, delirium tremens.

Tremulous, and patient thrusts or darts it out, in chorea.

Buff coat, like new leather, very dry, sharp-pointed, or it may be patchy, or papillæ elevated, typhoid fever.

Peculiar buff leather appearance in enteritis.

Thick coating, white or brown, mal-assimilation. Aphthæ, or ulceration in patches, mal-nutrition very great, so as to cause degradation of healthy living matter into micro-organisms; if very patchy the irritation may be deep.

Strawberry tongue, perhaps surface slightly coated in streaks, papillæ projecting greatly, is characteristic of scarlatina.

In hysteria, tongue often morbidly red, moist, with or without a coat.

Extreme dryness, diabetes.

The tongue is shining, glazed, or chapped in ulceration of the bowels. Warts on edges near root indicative of syphilis.

Tongue drawn to one side, effusion upon base of the brain of the opposite side. Red like a piece of raw beef, with a dark hue at the root, gastro-peritonitis.

Microbes gather upon the tongue in all germ diseases, as in the incrustation of typhoid, the germs are matted together.

THE SKIN.

Hot and cold alternately in the entire skin or a part of it indicates nervous depression.

Peculiarly thin and easily raised from the subcutaneous tissue in consumption and wasting diseases.

A feeling of fullness and tension in the eruptive fevers, amounting to even a sense of hardness in erysipelas, and a gritty feel in small-pox.

The nails are clubbed, and hair falls off, in tubercular disease. Loss of hair is common in the convalescing from fevers and in syphilis.

The skin is dry, harsh, in children suffering from tubercular disease.

Remarkably moist, soft, doughy in delirium tremens.

Pallor is due to defective filling of the capillaries, due to indigestion, anæmia.

Perspiration is sour in rheumatism, also in diseases attendant on mal-assimilation; an excessive perspiration of any kind may be accompanied with small blisters on the skin, sudamina.

Profuse drenching or colliquative sweats indicate great debility or exhaustion, as in lung-consumption or profuse suppuration.

A rigor or chill indicates nervous depression, and either fore-shadows a fever or formation of an abscess.

Rigor, with the cutis anserina or plucked goose-skin, denotes the presence of the malarial micro-organisms irritating the microscopical nerves of the skin, causing the muscles to contract in two different directions, thus creating a puckering.

Rigor occurring during the progress of inflammation indicates the formation of pus.

Jaundice, or yellow discoloration, disease of the liver, absorption of bile.

The crackling feel of emphysema is very characteristic, as is also the doughy character and pitting under pressure of anasarca.

Protuberant eyeballs, wasting disease.

THE APPETITE

Becomes excessive in diabetes.

Craving in mesenteric disease. When intestinal worms are present, variable and capricious.

In hysteria or anæmia of spinal cord, morbid, craving chalk or other alkaline substances.

In pregnancy, very fanciful, longing for articles of food usually abnormal.

In dyspepsia, variously altered.

THIRST.

A central origin in the brain or medulla must be assigned to thirst analogous to the sensation of want of breath, or air hunger. The sensation is peripheral, due to the excitation of nerves in mouth and throat, which pass from the centre.

In diabetes it is remarkably increased.

In cholera very urgent.

In diarrhea urgent, but less so than in cholera.

Diuresis with uncommon thirst, when there is no sugar in the urine, generally due to anæmia of cord or hysteria; not attended with hunger, urine of very low specific gravity.

Generally increased in all fevers.

ALTERATIONS OF COLOR.

In anæmia the skin is remarkable for its paleness; in chlorosis for its greenness.

In dropsy, from albuminuria, the skin is not only pale but white.

In nervous irritation, often of a marbly whiteness.

In phlegmasia dolens, where there is inflammation of veins and coagulation of their contents, the skin is as white as snow.

There is a dingy yellow hue in cancer which is easily distinguished by the pearly lustre of the eyes.

The yellowness of jaundice varies from a pale to a deep green yellow and saffron color.

Redness of the skin, when local, indicates congestion; when general it may be due to erythema, measles, scarlatina, heat, or erysipelas. Redness in gout or rheumatism is usually local.

In diseases of the spleen and lymphatics, whiteness and pallor; but when the blood is not greatly affected, it may be of a muddy hue.

In cholera morbus and malignant cholera, blue; in non-aeration of blood, in pneumonia, bronchitis, disease of heart, cyanosis, blue, especially the lips, neck, ears, nails, face, etc. Lividity might be applied to it instead of blueness, but this term is applied to incipient gangrene.

Spots, patches of discoloration, valuable in the recognition of certain fevers, purpura, scurvy, lead-poisoning, syphilis, and cutaneous disease.

In disease of the supra-renal capsules, bronzed.

In a well marked case of malarial fever blueness may be looked for.

The skin is of a peculiar uriniferous color and odor in uræmia.

Purple spots or patches in purpura and scurvy.

The pallor of anæmia and the greenish waxy hue of chlorosis are never to be confounded with the pasty hue of kidney-disease. The puffy appearance about the eyelids with anæmia is an indication of albuminuria.

The sallow hue of malignant disease is but another form of anæmia.

In disease of the heart and chronic bronchitis, the blue, livid, or slate color of the nose and lips is remarkable, and contrasts strikingly with the dusky hue of pneumonia or the hectic flush of phthisis.

In measles and typhus fever, suffused eyes are exceedingly characteristic.

Irregular habits of living generally indicated by a bloated blotched face.

In erysipelas, mumps, facial paralysis, the face undergoes remarkable changes.

SENSATIONS.

Flashes of heat and coldness are peculiar to nervous derangement.

An aura epileptica consists in a sensation of some kind, it may be like a gust of air on the side of neck and head, or a creeping up the arm or leg, or cold water running down the back, a feeling of insects in the skin, etc.

A sensation of pins and needles, or a pricking sensation, is peculiar to paralysis.

There is a great contrast between the external coldness of the body and the sensation of internal heat by which the patient is oppressed. In diarrhea there is often chilliness.

The heat of fever is often remarkable.

The sensations of a hypochondriac or hysterical patient are often opposed to the evidence of the senses and good reason.

A patient's complaint of want of sleep is sure to be exaggerated. The attendant's statement alone should be relied on.

The sympathetic or reflex pains are important. Pain in the right shoulder is indicative of disease of the liver. Pain in the sacrum, of inflammation of the uterus. In the knee, of inflammation of the hip joint; of the meatus, of stone in the bladder. At the orifice of the urethra, with aching in the thigh and retraction of testicle or irritation of the ovary, irritation of the kidney. In the cerebellum, of exhaustion of the lumbar portion of the spinal cord. A feeling as if scalp was rising, indicates irritation of the pneumogastric nerve. Drowsy, sleep sensation, or coma, may be due to bile or urea in the blood.

Pain anterior or posterior over either chest or abdomen denotes carcinoma.

Pain in the crown of the head, chronic inflammation of the womb.

EMACIATION SEEMS TO AFFECT,

In phthisis, the arms and thorax most, face least.

In abdominal disease, the lower limbs and face.

In disease of pancreas there is remarkable emaciation.

Increase of bulk often becomes remarkable in dropsy, say of the abdomen, of a limb, or of the head. It may arise from an internal or external tumor.

A delicate appearance, with long fringed eyelashes, points out the tubercular diathesis.

The thickened alæ of the nose and upper lip of tubercular diseases are most marked in childhood.

POSTURE AND GAIT.

Inability to stand depends on weakness, vertigo, paralysis.

In weakness and vertigo the patient reclines, in paralysis he sits.

In curvature of the spine and disease of the hip the body is bent to one side.

In excitement the gait is quick.

In debility, slow.

In disease of the brain and paralysis, labored, staggering, uneven.

In rheumatism and disease of joints, stiff, halting.

In chorea, constant involuntary moving.

In nervousness, tremor, and more especially in delirium tremens, regular shaking like shaking palsy.

Tonic spasm occurs in tetanus, disease of the spinal cord, poisoning with strychnine.

Catalepsy is a peculiar form of tonic spasm; cramp is its mildest manifestation.

Clonic spasm occurs in epilepsy, chorea, and hysteria; subsultus is also a form of clonic spasm allied to tremor.

In mania and delirium tremens, the muscular movements are exalted.

The muscular movements are generally diminished in idiocy and imbecility and in paralysis. A certain restlessness belongs to hypochondriacs and more rarely to hysteria, allaying them with delirium in the external manifestation.

POSITION.

Head chiefly elevated in disease connected with the heart, less frequently in disease connected with the lungs.

Head bent forward when there is pressure on the trachea.

Patient may be unable to lie down from pain of head or giddiness.

Lying on the back is the position of debility; also position for paralysis when combined with inability to alter it; also in acute rheumatism. Same position assumed in acute gastritis,

peritonitis, metritis, cystitis, with head and shoulders elevated and knees drawn up toward the abdomen.

A prone position is generally assumed in abdominal spasm or colic.

A doubled up position, with or without vomiting, is present in colic, the passage of gall stone or a calculi through the ureter.

EXPRESSION.

In disease of the heart, and in urgent dyspnoea, acute laryngitis, the face is remarkably anxious and contracted.

When there is much pain in a vital organ, the face is pinched and contracted.

Immobility most remarkable in catalepsy, or in states of unconsciousness and under the influence of spasm and in tetanus.

In nervous disease and hysteria, the opposite state exists.

By the swelling of erysipelas the face is materially altered.

CHARACTER OF THE STOOLS.

Digestion during the day in stomach. During the eight hours of sleep is carried on in the bowels, and the peristaltic wave is started in the act of masticating breakfast. The entire ingesta is emptied into rectum, so one defecation in the twenty-four hours. Any deviation from the rule is disease; more frequent, diarrhea; less frequent, constipation.

Watery, mucous in diarrhea.

Undigested food in stools shows that stomach, liver, pancreas, are at fault; if fat is passed, the latter.

Very solid and retained longer than twenty-four hours, constipation.

In typhoid fever, like pea soup.

In cholera, like rice-water.

In acute dysentery, blood, mucus, pus.

In chronic dysentery, muco-purulent discharge.

When an internal abscess bursts into intestinal canal, pure pus.

When black, the stools are likely to contain blood.

In piles or hemorrhage low down in bowel, blood of a natural color.

In deficiency of bile they are clay-colored; in excess, very dark brown.

When fermentation supplants digestion, frothy, yeasty.

Enlargement of prostate causes the stools to be flattened like a ribbon.

In stricture of the rectum, cut or chopped into flattened pieces.

In disease of the pancreas, there is fat or oil-globules in the stools.

Green, resembling chopped spinach in color, irritation of brain.

In intestinal catarrh, stools mixed with mucus.

Stools imbedded in mucus, an affection of the colon.

The evacuation of pure mucus from the bowel without any admixture of feces points to catarrh of the rectum. When firm feces are passed, completely enveloped in mucus, we may conclude that the morbid process affects the lower part of the colon and rectum. The admixture of mucus with the feces in abnormal quantity is not always apparent to the naked eye.

It often happens that when the feculent matter is examined microscopically there are found scattered intimately through it small masses of mucus, which are whitish-gray hyaline and transparent. This peculiar admixture of mucus indicates that the catarrhal affection is limited to the upper portion of the large intestine (and possibly, the small intestine), while the rectum and descending colon are free from disease. When the stools contain small masses of mucus tinged yellow with bile pigment, we may conclude that the small intestine has become affected. In normal feces, the reaction which is characteristic of bile pigment cannot be obtained; but when, from whatever cause, the peristaltic action of the small intestine is increased, this characteristic play of colors will be seen on the addition of nitric acid.

Character of the Nails.—Clubbed or filbert shaped nails in phthisis pulmonalis.

In gout, reedy, brittle; rot, black in great nerve shock.

Suppuration of the nail bed in children, due to inherited syphilis in the parents.

In leprosy, broken up, fibrous, much thickened, lifted up by the formation of epidermis, scales in the nail bed, no smooth surface to be seen on any of them.

The onyx of the nail copper colored, syphilis.

A distinct transverse ridge, acute disease, like typhoid.

RESPIRATION.

The normal pulse divided by four gives the number of respirations per minute, provided there is no disease of the brain, lungs, or heart. Number of respirations at various ages per minute: First year, 35; second year, 25; at puberty, 20; adult age, 18; old age, 15 to 16. Most frequent in inflammations and fevers.

Pauses in respiration, cerebral or cardiac disease.

Stertorous, labored, with deep sleep, in inflammation of brain, apoplexy, congestive fevers, as typhus.

Imperceptible in collapse, cholera. Very embarrassed in cardiac and bronchial disease.

Hurried or excited respirations are common in nervous excitement, hysteria.

The odor of the breath is often significant. It has a chloroform odor in melituria, diabetes, and chronic alcoholism, when there is sugar in the blood.

Loud respiration under all conditions in which the air-cells are less permeable.

Feeble respiration may be produced by pleuritic effusion, adhesion of the lungs to chest-walls or obstruction of air-passages.

Absence of respiration in catalepsy or great weakness. The respiration is often grating, caused by thickening of the air cells; grating and short in acute bronchitis and pulmonary congestion.

It is often tubular or blowing, which indicates induration or pulmonary condensation.

It is often cavernous or hollow upon the breaking up of cavities in the lung.

It is sometimes buzzing, which indicates a large cavity in the substance of the lung.

The rhonchus and sibilant rales are dry, sonorous, whistling, cooing, snoring, in inflammation of the bronchi.

The crepitating rale resembles the friction of the hair rubbed between the fingers; it is to be heard when resolution begins in pneumonia or bronchitis at the seat of congestion.

The sub-crepitating is the ordinary moist rattle caused by air going down and up through a fluid—the density of the fluid modifying the sound.

TEMPERATURE.

The pulse at birth ranges from 130 to 140; respirations from 33 to 40, and animal heat from 102° to 103° Fah., from which period to puberty there is a gradual decline. From puberty to twenty-five, the pulse reaches 70 or 80; respirations, 18, and the temperature 98° Fah., at which they remain if in perfect health till between forty-five and fifty-five, when there is an appreciable decline. A rise is indicative of diminished vitality and ptomaine excreta from disease germs, and the greater the rise the more aggravated the loss of vitality; and a continued depression, if persistent, is indicative of disease. Observations by the thermometer should be made morning and evening, and a due allowance made for the diminished electrical condition existing in the night, during which time the type of all diseases is much intensified, and labor, death and other conditions are more likely to occur. In applying the thermometer the bulb should be placed under the tongue, mouth closed, or applied in the arm-pit, or to the groin or belly, and be retained in close contact with the skin and well covered and allowed to remain several minutes.

In all conditions of partial death, as in fever and inflammation, we have an elevation, whereas in collapse, emphysema, cholera, atrophy of heart, etc., there is a remarkable decline. A rise to 103° to 105° is indicative of danger; above that almost invariably fatal. A lowering, if persistent, below 85° , unfavorable; a very sudden fall below that occurring in an acute attack of peritonitis, etc., may indicate gangrene, or perforation of bowel in typhoid.

During convalescence, a sudden rise in temperature, pulse, and respirations may indicate a relapse.

We have no instrument superior to the index and adjoining fingers for the pulse, and by the hand laid flat across the base of the chest the respirations can be easily counted.

If there is no disease of the brain proper, heart or lungs, there will be a perfect harmony existing between heat, pulse and respirations. Pulse 72, divided by four, gives respirations 18 and heat 98° in health, with the rise or fall of each in disease.

Odors.—The diagnosing of disease germs, and their ptomaines, is of great importance. Most physicians can name the microbe at work the moment he enters the sick chamber. The microbe and its ptomaine have a diagnostic odor in spite of frequent bathing, ventilation, cleanliness, and all sanitary precautions; the microbe in every case assails the nostrils of the medical attendant.

Measles, scarlet fever, and small-pox are easily recognized by the odor of their respective microbes. The patient will often recognize the dreadful smell of small-pox, and compare the odor of his skin to that which he first experienced on taking the disease.

The odors of typhoid fever and pneumonia are perceptible near the patient and in the room.

There is also a peculiar emanation in tuberculosis, in cancer, and syphilis, with odor of each microbe respectively diagnostic of each.

The odor of hydro-sulphate of ammonia is always present in open cancer, and on that smell we place great reliance.

In spite of great cleanliness, the odor of the gonococcus is perceived at some distance.

The victim of masturbation has the odor of the ailanthus or dog kennel—the microbe of this degraded bioplasm affects all weakly persons in its proximity, hence its prevalence in prison-retreats.

The mousey smell of the streptococcus of erysipelas, carbuncle and typhus fever is indescribable.

There are various odors in the lying-in chamber emanating from the patient,—the usual odor of the lochia, that of the lacteal secretion, and that which indicates the approach of puerperal fever, the micrococcus active.

Many women emit a peculiar odor while menstruating, which resembles a mixture of blood and chloroform; others have peculiar odors from parts of the body.

A peculiar fecal smell is experienced from a lunatic or hypochondriac, very nearly the same as is experienced from patients who suffer from habitual constipation.

The uriniferous odor of uræmia emitted by persons suffering from diseased kidney is all-important.

The comma-bacillus of malignant cholera can often be detected very early by the odor given out by the skin, breath, and stool.

The odor of the sick-room and of the body of the patient generally, the smell of the breath, the sputa, urine, fæces, sweat, ulcers, are utilized for diagnosis and treatment.

The cadaverous odor is a peculiar earthy smell emitted from the body, sometimes as early as two weeks before death, in other cases a few days.

The smell of the streptococcus of diphtheria is pungent, and is never forgotten.

The chloroform odor of the glucose fungus in the breath in diabetes is most significant.

THE WEIGHT OF THE BODY.

The average weight of the body at birth is about seven and one-half pounds. We meet with cases frequently over twelve pounds and as low as two pounds in living children. But when the average male completes the twenty-fifth year of his age, growth has reached its maximum, but not weight. The general weight consistent with good health and stature should be as follows:

Stature.	Mean Weight, Pounds.	Weight Increased, 7 per cent. Pounds.
5 ft. 1 in.	120	128
5 " 2 "	126	135
5 " 3 "	133	142
5 " 4 "	139	149
5 " 5 "	142	152
5 " 6 "	145	155
5 " 7 "	148	158
5 " 8 "	155	166
5 " 9 "	162	173
5 " 10 "	169	181
5 " 11 "	174	186
6 "	178	190

If greater than the allowed seven per cent., it affects the vital capacity, and respiration becomes diminished. Clothes average about one-eighteenth of the weight of the body in autumn and early spring. Loss of weight is indicative of phthisis, bronchitis, nervous dyspepsia, and other exhausting diseases.

CHARACTER OF THE URINE.

In hysteria, and anæmia of the spinal cord, due to self-abuse, the urine is remarkably pale, limpid, and abundant, with a very low specific gravity,—1006 or 1010.

In all fevers and inflammations it is scanty, high-colored, and loaded with uric acid, the result of excessive waste of tissue, which deposits on standing.

If very scanty and much acid, there is a very copious brick-dust deposit.

In disordered liver it gives a red stain to the vessel.

In jaundice the presence of bile gives it a dark porter color.

If blood is mixed with urine, it has a smoky color when acid; a pinkish hue when alkaline; quite crimson when much blood is passed.

The greatest amount of acid in urine is to be found in acute rheumatism or the uric acid diathesis. Urine, when it deposits a white limy or calcareous matter, denotes nervous disease or the alkaline diathesis; if it contains pus there must be ulceration either in urethra, bladder, or kidneys.

In melituria or diabetes, urine very copious, increased beyond the amount of fluids taken, loaded with grape sugar, and usually of a very high specific gravity ranging from 1035 to 1065, but in rare cases it is very low and still sweet.

Healthy or unhealthy urine may have a peculiar aromatic smell, which may be affected by many articles of food or medicine, such as asparagus, garlic, cubeb, turpentine, copaiba.

Urine voided in the twenty-four hours in a man of average height free from disease, averages about thirty ounces in the summer, and forty in the winter. It should weigh about fifteen per one thousand parts more than distilled water.

If the kidneys are weak it may be highly albuminous, which can be readily detected by boiling, which coagulates the albumen.

In disease of the brain it may be loaded with a white floury substance, which can be precipitated by a solution of nitrate of silver.

Albumen is found in the urine in conditions of weakness, irritation, and collapse of the kidney, and also in diseases of the blood, as anæmia, purpura, and is easily detected by boiling the urine in a tube, when, if albumen be present, it will become milky or cloudy; then add a few drops of nitric acid, which will clear the urine and coagulate the albumen into a mass. Its quantity can also be ascertained in the same manner.

Phosphates and Chlorides represent waste of brain and bone, and are present to a certain extent in all urine, but are greatly in excess in all nervous diseases, as epilepsy, chorea, masturbation, paralysis, white softening of the brain, and other states. When very excessive they appear as a white cloud in urine, or in a copious white flour or gritty deposit in the bottom of the vessel.

They are easily detected and their quantity estimated by boiling an ounce of urine, and adding a solution of nitrate of silver

in the proportion of sixty grains to the ounce of water, which will precipitate the entire amount of phosphates in the urine, when the excess must be deducted from the normal amount, which will indicate the condition of nerve-waste or nerve-tire or exhaustion present.

Pus is only present when there is suppuration in the kidney from a stone, or from ulceration of the bladder, or catarrh, or a gonorrhea, and is easily detected by boiling the urine and adding some liquor potassæ, which will coagulate the pus into a gelatinous mass, or by the addition of the peroxide of hydrogen to the urine, if pus be present effervescence will take place.

Sugar in the urine does not indicate disease of the kidney, but rather of the liver, pancreas, or more especially of the co-ordinating chemical centre in the brain,—in some cases to over-feeding; and for domestic purposes can be easily ascertained, if it exists, by placing the chamber with the newly evacuated urine in a warm place, keeping it at 80° Fah., and adding a teaspoonful or more of yeast; effervescence will soon take place, a brisk discharge of gas ensues, and a yellowish liquid is formed, which has the odor of beer, and by distillation yields an alcoholic liquid. The quantity of sugar present can be estimated, since every cubic inch of carbonic acid gas given off by fermentation corresponds to one grain of sugar, so that the quantity can be readily approximated.

Bile in the urine is likely to be present in disease of the liver, and it may be necessary to distinguish it from certain color principles as rhubarb and santonine. Dip a white rag into urine that contains bile, it is at once colored yellow. Pour a little urine on a sheet of writing-paper to form a very thin layer and let one or two drops of nitric acid drop on it. If bile be present, green and pink colors will show themselves around the drop. This can be confirmed by mixing a little muriatic acid with the urine and then adding a few drops of nitric, and a change of colors, of yellowish-green, blue, violet, red, occurs.

Uric Acid in excess represents rapid waste of the nitrogenous elements, as in fever and inflammation, but a supply of nitrogenized food greater than what is required for the repair of the tissues, such as excessive indulgence in animal food, too little bodily exercise, isolation, monotony, sameness, deficient aeration of the blood; and also an insufficiency of gastric juice is easily detected by the blue litmus-paper being turned red by the brick-dust sediment to the chamber-vessel.

MICROSCOPE.

A thorough knowledge of all the tissues of the body, its normal and abnormal secretions, is necessary for diagnosis with the microscope. An instrument of small power is the most useful, say from 250 to 300 diameters, one whose adjustment is

easy, so that an object can be readily detected. It is of great utility to detect diseased germs in the secretions, especially in discharges or scrapings. For example, by scraping the tongue in all cases of mal-assimilation, we can see the *bacteria*, in typhoid fever, the *vibrios*; in diphtheria, *streptococcus*; in the discharge from the nose in catarrh, the *ameba*; in the urine, the germs of *cancer*, and in the sputum, those of *tubercle*. Most invaluable, and one which the uninitiated in medical science can readily and at once appreciate.

VITAL CAPACITY OF LUNGS.

To test correctly it must be done by a spirometer, an instrument used to measure the volume of air expired from the lungs. Quantity expired after the most complete inspiration is the total volume of vital capacity. The vital capacity increases with stature and is considerably affected by weight. The capacity to breathe is affected most by phthisis. The following table shows the capacity in health and in the three stages of pulmonary consumption:

CAPACITY IN HEALTH. CAPACITY IN CONSUMPTION..

Height.		Cubic Inches.	First Stage.	Second Stage.	Third Stage.
5	ft, 1 in.	174	117	99	82
5	" 2 "	182	122	102	86
5	" 3 "	190	127	108	89
5	" 4 "	198	133	113	93
5	" 5 "	206	138	117	97
5	" 6 "	214	143	122	100
5	" 7 "	222	149	127	104
5	" 8 "	230	154	131	108
5	" 9 "	238	159	136	112
5	" 10 "	246	165	140	116
5	" 11 "	254	170	145	119
6	" "	262	176	149	126

To test the vital capacity, a man should stand in the erect posture, take as deep as inspiration as possible, at the termination of which the tap should be turned off by the operator and the vital capacity can be traced off the scale. It is not for one moment to be supposed that the lungs are emptied of air, as there always remains a certain proportion called residual air.

The vital capacity is generally diminished in bronchitis, emphysema, pneumonia, as well as in consumption and in disease of heart and viscera of the abdomen.

Spirometer.—An instrument for measuring the volume of air expired from the lungs. Females measure less than males, and in either sex the lung-capacity decreases after fifty. The quantity of air expired after complete inspiration is termed the

vital volume or capacity. This increases by stature. Obesity diminishes the breathing capacity; so also does any abnormal condition which interferes with the mobility of the thorax or the inflammation of the lungs. Effusion into lung-structure is the most prominent of all forms of obstruction. Every inch of consolidated lung insures a decrease of forty cubic inches of air by measurement, and should have immediate attention.

ELECTRICITY

As a means of diagnosis is of rare value. The best mode of application is by or through wet sponges. The positive pole in all cases should be applied to the origin of the nerve, and the negative to the other end. By placing the positive at the nape of the neck, the centre of all nerve-supply to the body, and the negative over the chest and abdomen, any weakness or tenderness can readily be detected; or, running it down the spine, any loss of vitality in any special nerve can be recognized by a soreness, or burning, or tenderness over it, and the disease located in the cord and organ to which the nerve branches. It is particularly valuable in recognizing the diseases of muscles, especially any tendency to fatty degeneration. In placing the positive pole at the origin of a muscle and the negative at the other end, the muscle if healthy will knot or contract in the centre. The battery must be of sufficient power. The points which it elucidates are the tenderness and soreness of weakened parts, and behavior of the muscles. Still it is capable of defining precisely obscure forms of paralysis, whether due to effusion or white softening.

In diagnosing paralysis, it is well to test the sound side first, then the affected side, and compare the result. Keep the two poles on the muscles about four inches apart; the positive to the origin, and the negative to other end, then the contractility can be compared.

In Hemiplegia due to effusion, the paralyzed muscles lose their contractility at once; in that due to white softening, by degrees.

In Paraplegia, the condition of the paralyzed muscles is similar to hemiplegia.

In lead and mercurial paralysis, the contractility remains after the power of voluntary motion is gone, or till atrophy has set in.

In rheumatic paralysis, the contractility is usually normal.

In progressive muscular atrophy, diminished contractility follows the gradual destruction of the muscles.

THE SPHYGMOGRAPH

Is an instrument designed to give the curve of the radial pulse by tracing. It is strapped on the wrist and is moved by the

stroke of the pulse. It never can supersede the fingers, but as a curiosity or toy is well adapted to deceive the ignorant.

SPINAL DIAGNOSIS.

The method of diagnosing disease of the chest and abdomen by mapping out a seat of irritation or anæmia of the spinal cord is old and empirical. It consists in either applying a sponge pressed out of hot water, or the electrode of a battery, or pressure with the fingers in the intervertebral spaces. If a tenderness or weakness or irritation can be detected, then it is supposed that there is lost vitality in the nerve or nerves that emanate from that point, and the organ in chest or abdomen that the nerve supplies suffers from diminished vitality or disease. The irritation or disease in an organ is carried to the cord, which is a reflex centre, sets up an irritation there, and a tenderness or weakness can be detected. In hysteria, masturbation, and other anæmic conditions of the cord, such points are said to exist. The method has no merit, neither is it reliable, but often subserves the ignorance of the charlatan.

LONGEVITY.

By this is meant the mean number of years which at any given age the members of a community, taken indiscriminately, may expect to live. An easy rule, and one very generally adopted by life insurance agents, has been established for determining this fact, and corresponds very closely with our best statistics. The criterion or rule for determining this is: The expectation of life is equal to two-thirds of the difference between the age of the individual and eighty. Thus, a man is twenty years old, sixty is the difference between this age and eighty; two-thirds of sixty is forty, and this is the sum of his expectation. By the same rule a man of sixty will have a lease on life for fourteen years; and a child of five for fifty years.

Another method of testing the longevity is by drawing a piece of thread from the outer corner of the eye to the centre of the prominence at the back portion of the head (the occipital protuberance), taking the opening or meatus of the ear as the index. If the opening is below the line, and for every degree below, strong vital tenacity—a degree of vital force that will weather grave disease; if the opening is on the line with the cord, vital force is very weak, little power of resistance to ward off morbid action; if the opening is above the cord, the slightest, most trivial disorder will cause death. The natural atrophy or shrinkage of the brain in old age and in whisky drinking is often remarkable, and exhibits the veracity of this line or angle.

TEMPERAMENT, CONSTITUTION OR DIATHESIS.

Many persons show in their general appearance that they have a constitution which is liable to certain forms of disease. The recognition of such peculiarities of appearance may be of great importance in cases in which it is difficult or impossible to obtain a complete history of the case.

The following are the more important varieties.

1. *The Sanguine Constitution*.—Body well developed, head large, teeth massive and good, complexion ruddy, hair thick, digestion and nutrition good, pulse hard, blood pressure high. In later years the body becomes corpulent, and the signs of old age come on prematurely. Such persons are liable to arthritic affections of all kinds, and to diseases of the heart and blood vessels, angina, fatty heart, aneurism, atheroma, apoplexy, etc.

2. *The Nervous Constitution*.—Figure small and wiry, face mobile, features small and delicate, great activity of mind and body, dyspeptic, and with highly strung nervous system. Individuals of this temperament are specially liable to nervous diseases of all kinds.

3. *Tubercular Constitution*.—The whole osseous system badly developed, joints enlarged, mucous membranes irritable, upper lip and alæ nasi thick, thorax contracted, skin pale and delicate, and hair thin. Such persons are liable to diseases of bones, lymphatic glands, and to tubercle in all its forms.

4. *Lymphatic Constitution*.—Body large and clumsy, muscles flaccid, face pale and expressionless, movements slow, and functions both of body and mind sluggish.

5. *Bilious Constitution*.—Face oval, long upper lip and chin, long nose, complexion dusky, digestion sluggish, liver in particular being inactive, nervous system not highly strung. In its further developments this constitution passes into melancholic, where the patient takes gloomy views of things in general. Such persons are liable to melancholic insanity.

6. *Gouty Constitution*.—Hair early gray, little tendency to baldness; nose short, rounded, and red; cheeks ruddy, eyes generally dark, teeth large and covered with thick enamel, digestion bad, suffers much from dyspepsia, heart tends to degenerative changes, arteries atheromatous, arcus senilis appears early and is well marked. Persons of this constitution are liable to all the forms of gout, to the cirrhotic form of Bright's disease, to neuralgia, and to apoplexy.

7. *Rheumatic Constitution* closely resembles the sanguine, as already described. There is, however, in it a greater tendency to fullness of body and less general vigor. The teeth are liable to early decay.

The greatest differences that can be obtained between the respective sexes within the race between the vital temperaments is the most favorable for a large, long-lived, energetic, civilizing race,—the difference is essential for a healthy offspring. All marriages in antagonism to this law will entail on the children some unfortunate result. Children born from parents partly incompatible possess a feeble organization, which is liable to yield to the simplest forms of diseased action, and it is here that a scientific practitioner is so frequently baffled—his best resources of no utility, for in its very birth, blood, tissue, organization, disease and death are stamped, the product of incompatible marriage.

It is unnecessary to repeat that races are antagonistic and distinct, that marriage should never be consummated outside of the race, for if it is, and there be offspring, that progeny will be tuberculous and will inevitably die out. It is simply a deterioration to both races concerned in the effort, and should be prohibited by the most rigid legal enactments, and not countenanced by a set of pseudo-fanatics.

Modern clinical pathology enjoins on every one treating disease, the necessity of a careful examination of the patient. Often, indeed, correct diagnosis, and consequently treatment, depends on the performance of this duty. Exact elucidation of the case is always necessary, as neglect of the presence or absence of a single point may be of grave importance.

FOR A MORE ELABORATE—A NEWER DIAGNOSIS BASED UPON THE PRESENCE OF PATHOGENIC MICROBES AND THEIR PTOMAINES IN THE BLOOD AND TISSUES, AS THE CAUSE OF DISEASE, SEE THE LARGE WORK ON "BACTERIOLOGY."

ABSCESS.

Abscess. Pyæmia. Streptococcus Pyogenes.

In all forms of inflammation when lymph is effused and permitted to remain, there is a liability when any adverse condition sets in of that lymph breaking down—changing its character, and becoming pus, a living matter but a deadly poison.

Four forms of micrococci are recognized as being associated with septic processes. Two of these are *staphylococci*, occurring in large groups in masses resembling a fish roe, or a bunch of grapes; microscopically, and in their effects on animals they are alike; when cultivated, however, the *S. pyogenes aureus* produces golden yellow opaque colonies, and the other, the *S. pyogenes albus*, white opaque masses.

The third form, *micrococcus pyogenes tenuis*, is only occasionally found.

The *Streptococcus pyogenes* microscopically resembles closely the micrococci connected with erysipelas and puerperal fever, but differs from each in the manner of growth and effects produced in animals. These pus-producing organisms are either found alone or together; sometimes in apparently similar cases different forms may be found, the staphylococcus and the last named being the most common.

The pus, in whatever form, contains the pathogenic microbe, whether it be pure, muco-purulent, or on bandages. The microbe consists of slender rods, linked two or three together, or else collected in regular masses, multiplies rapidly if temperature is kept over 100° F. by spore formation on liquid gelatine. In 24 hours, cultures exhibit the germs by coloring matter and are fit for injection.

In all cases the formation of this pus germ must be prevented by a more energetic treatment of all forms of inflammation by bactericides.

All abscesses, should either be opened or injected with peroxide of hydrogen, the latter administered internally.

FOR A MORE THOROUGH DESCRIPTION OF THE STREPTOCOCCUS PYOGENES (THE PUS-MICROBE) ILLUSTRATED, WITH AN ENUMERATION OF OUR NEWER REMEDIES, THEIR USE, FOR WIPING OUT THIS GERM, SEE PAGE 415 OF THE LARGE WORK ON "BACTERIOLOGY."

This bacillus originates chiefly endermically among cows, in particular pastures, such as oats grown upon soil which had lain dormant for some years—certain states which give rise to a fungus in the oat cereal, which passes into the cow's mouth, through some crack or abrasion caused by the sharp fodder, hence it is so commonly found on the tips of the cow's tongue and entire mucous-membrane of the mouth, with panicles of oats and other grain. Man may be infected directly from the oat. It is not probable that the eating of the flesh of the cow causes the infection, for the fungus is destroyed the moment it is immersed in water, so that the meat or flesh seldom leaves the kitchen with the power of doing harm. Milk of the infected animal is the chief means of communicating the microbe to man. In the human being it has a special affinity to localize about the mouth, either in the mucous membrane, through an erosion in or on the jaws, or exposed pulp of a carious tooth. When it enters the blood, its next favorable location is the lungs, liver and blood-forming glands.

This microbe when once in the mouth may be communicated by kissing, by the forceps and other instruments of dental parlors.

It is often mistaken for the tubercular bacillus, to which it bears no resemblance whatever.

Microscopical Appearances.—Seen in a low power 250 diameters, in the form of a rosette of pyriform, or club shaped masses, which are arborescent, pure white, of a yellowish tinge.

Through the mouth, whether in milk, by a kiss, or dental instrument, the microbe enters the human organism. There it is likely to set up an irritation, inflammation, which results in the formation of a neoplasm, composed chiefly of round cells which may break down or go on increasing in size, forming nodules, with fibrous growths between—the nodules by and by become purulent excavations or cavities, abscesses. If the microbe does not enter through some erosion in the mouth, then it selects the lungs, where it produces great havoc, destroying their substance, giving rise to very fetid expectoration and night sweats. The liver, pink marrow, lymphatics, tonsils, often become invaded by the fungus.

The microbe bears cultivation well in blood serum or strong beef tea; it is pathogenic of the disease, for if the culture is injected into any mammalia, it within twenty-four hours causes the disease to appear.

The disease engendered by the fungus is most common among butchers, milkmen, cattle dealers and the habitues of dental offices.

The microbe is sterilized and completely annihilated in the presence of one or other of the following remedies, peroxide of

hydrogen; anti-microbe powder; salicylate soda in tincture of siegesbeckie; ozone water; chloride of gold; but before these are applied, free incisions, openings, and counter openings, into the diseased parts should be made, so that the remedy reach the microbial nest. Sulphide of lime and glycerite of ozone are our best internal bactericides.

For a more elaborate description of this micro-organism, "Actinomyces," splendidly illustrated, with a graphic outline of the best methods of completely annihilating it and neutralizing its ptomaine with our newer remedies, see page 40 of the large work on "BACTERIOLOGY."

Alcoholism.
Delirium
Tremens.

Acute and chronic alcoholism; a condition of cerebral anæmia, with debility, following the use of alcohol.

The anæmia of the brain is so great that the brain is shriveled and bloodless.

Relaxation of the blood vessels of the eye are so intense that they become varicose, and the brain, looking through the eye at the external world, sees these tortuous vessels and compares them to grotesque or frightful objects. Insomnia, tremors, mental derangement. The morbid cerebral excitement is the effect of the poison, whether it be a loquacious, furious muttering or a comatose condition. Usually arrested secretion, irritability of stomach, mucous membrane, acid sweat, doughy skin, chloroform breath.

In the acute form, aromatic spirits of ammonia in drachm doses, in water, repeated at proper intervals, is the best agent to sober the patient.

If the case is chronic, take syrup of orange peel, two drachms, chloral hydrate and bromide potassium, of each twenty grains, give at one dose; repeat till patient is subdued. This combination should be alternated with equal parts of fluid extract of lupulin, and tincture of capsicum, a teaspoonful of each. This last remedy is excellent for the dyspepsia of drunkards.

If patient cannot be controlled by ordinary methods, give hypodermic injection of morphia and tincture of green root gelsemium; alternated with *passiflora incarnata*. To correct the habit, the use of alcoholic stimulants must be given up; capsicum used as a substitute. Patient must be well nourished by a nutritious diet, as there is always danger from exhaustion. Soups, beef tea, strong coffee, eggs, milk, fruits, lemonade, and for three months the patient should take coca, so as to eradicate the habit.

Alopecia.

Baldness more or less complete. Four groups, *atrophic; structural; pigmentary; parasitic.*

Microbes in the blood, shattered vital force; senile changes whether due to masturbation, syphilis. Any thing which interferes with the nutrition of the hair, as worry, care, study, neuralgia, may give rise to pigmentary changes, or alopecia

areata, a sudden change of color, or the formation of smooth white patches, perfectly bald.

Any hairy portion of the body may become affected, as well as the scalp.

In the management of these cases a general course of alteratives and tonics: saxifraga; phytolacca; oats; kephaline, etc. Scalp or affected part washed daily with castile soap and tepid water, well dried and some of the following lotions rubbed into the scalp or affected part: Bay rum half a pint; glycerine one ounce; boroglyceride, two ounces; tincture cantharides one ounce; mix.

The eye being an optical apparatus through which the brain looks at the external world, **Amaurosis.** **Blindness.** there are various conditions often existing that render it inoperative, as anæmia; congestion; poisons; reflex from worms, etc., and organic conditions, as softening of the brain, so that the treatment of blindness must vary to conform to one or other of the *five* causes that produce it:

If due to anæmia, better food, fresh air, mineral acids, cinchona, coca, oats, kephaline.

If due to congestion, cups to nape of neck, heat to feet; free purgation, calabar bean, alteratives, etc.

If due to poisons, tobacco is the most common, discard it; coca, substitute it; so with chloral and others.

If due to reflex states, as worms, masturbation, they must be removed; practice abandoned; nitro-glycerine, quinine, and *passiflora incarnata*.

If due to white softening, deprivation of brain essence, coca, kephaline, sativa. Most nutritious food.

An absence of the menses. They may never have appeared, owing to congenital malformation or debility. There may be constitutional defects, or they may be masked, or vicarious, or form a uterine clot. They may have appeared and become suppressed by cold, shock, or poverty of nerve force, uterine or ovarian disease. It may be irregular or vicarious, coming from the nose, ears, skin, gums, lungs, stomach, anus, bladder, nipples, fingers, toes, ulcers and joints.

Likely to be complicated with dyspepsia, tuberculosis.

Remedies.—The royal remedy in all cases is the compound betin pill; its action is salutary; never failing; apiol is next best; cotton root often of utility; apiol solution effective, after every remedy fails.

Phosphorus, glycerite, ozone, sulphur, are of utility, together with general tonics.

General Measures.—The feet to be kept warm, abdomen covered with flannel; any congenital defect, if admissible, recti-

fied; constitution to be built up by tonics, diet, massage, and the liberal use of coca wine; gentle exercise out of doors; use every means that the condition in life will warrant to restore health.

In atony, or atrophy, use compound betin pill.

A deficiency of the red corpuscles of the
Anæmia. blood.

Generally the result of hæmorrhage or loss of blood—other cases due to meagre, or bad food, want of sunlight, solitary confinement, deleterious trades.

Its diagnosis is, the history of the case, great debility, paleness or a bloodless condition, feeble circulation, palpitation, specks or spots before the eyes, noises in the ears, vertigo, coldness, albumen in urine.

Our best remedies are rest in the recumbent posture, pure air, most nourishing food, as raw eggs, juice of beef, sunlight—push compound tincture cinchona and mineral acids; strophanthus, acetic tincture of iron, coca, avena, kephaline; passiflora.

Effusion of serum into the cellular tissue,
Anasarca. due to obstruction in the kidneys. (See Dropsy.)

Anchylosis.—Immobility or stiff joint. Two forms. Spurious or false and true—the *former* in which sufficient lymph is effused merely to impair the mobility of the joint; in the *latter*, the effused lymph is in sufficient abundance and organized either into cartilage or bone, so as to destroy completely the integrity of the joint.

Before any procedure is thought of precautions must be taken to guard against the evolution of the bacillus amylobacta.

The False or Spurious form is best treated by the occasional application of the ozonized clay to excite absorption. When clay is not on, some preparation either of iodine, iodol, cadmium, wormwood, belladonna, electricity; passive motion slowly till effused lymph is absorbed.

The True Form, where bony union has taken place, forced rupture, excision should be resorted to, combined with the same management as for the false.

Is formed by the dilatation or expansion of
Aneurism. the coats of an artery through which the blood circulates; pulsates synchronous with systolic action of heart. It may consist of a dilatation of all the three coats of a vessel or of one or two. It forms a pulsating tumor, and if the vessel can be compressed between the aneurism and heart, pulsation ceases.

The causes of aneurism are numerous, as inherent weakness of organization, straining, coughing, lifting, hoisting or jumping.

Slow the heart with digitalis; increase fibrin in blood with animalized diet; coagulate or clot blood in tumor with cinchona and mineral acids; ergot, carbolic acid or creosote or guaiacol. Rest in recumbent posture.

Angina Pectoris.

Neuralgia of heart; severe pain in the heart, occurring in paroxysms, and numbness in left arm; on seizure of pain, the action of heart arrested by the spasm; fainting, collapse, ghastly features; pulse wanting at wrist; respiration also suspended; duration, from a few minutes to hours and days. The cause is depression of the sympathetic and cardiac branches, irritated by the lactic acid of rheumatism or the lithiate of soda of gout; great poverty of nerve force invariably present; standard of vitality much lowered; some disease of blood usually present. Most common when electrical forces of atmosphere are lowered in the evening. Place patient in a comfortable position; plenty of fresh air; loose clothing; dry heat over the heart. Break spasm; relieve the intense pain. Try nitrate of amyl by inhalation, try lobelia, try aconite, belladonna and chloroform over the heart, try con. ozone. When the paroxysm is over forbid the use of tobacco, all excesses, all worry, all excitement, all passion.

Paroxysms, irritating plaster over the heart for some months, get rid of the microbe of rheumatism, the lithiate of soda of gout. Keep stimulating heart with a special cardiac vitalizer as strophanthus, lily of the valley; cactus, spartein, adonin, creatine, quinine, nitroglycerine, coca, kephaline, passiflora incarnata, nitrite of amyl. Food light, nutritious, generous, animal food, cream, milk, tea, bathing, massage, rest.

Anthrax. Wool-sorter's Disease.

Anthrax originated among a large number of our domestic animals when placed in conditions adverse to their normal vitality. The cow, sheep, goat are often victims of splenic fever. The microbe of this fever being the bacillus anthrax, which is readily communicated from those animals to man, either by their breath, hair, milk, water, vegetables.

The recognition of anthrax in the human being is most difficult. The history of the case, a wool-sorter, a tanner, a butcher may be suggestive, but not reliable, for the milk of the affected cow may be taken by a child and death ensue in a few hours without a spot being perceptible on the skin. The excrementary discharges from infected animals pollute the soil, rivers, ponds, and are taken in by inhalation. If there are pustules present, the diagnosis is easy. We must depend upon a microscopic examination of the saliva, blood, urine, discharge of the pustule. The bacillus anthrax is easily recognized, as it consists of rods, long and broad, and threads with spore formation present and active; rods are straight or sometimes curved, rigid and motion-

less; vary in size in different animals. The bacillus anthrax is the most tenacious of life of all microbes, and excretes the most virulent, deadly ptomaines in great rapidity and in immense quantities. It is a microbial disease more fatal than rabies, and exists in our midst. It is the most rapid breeder, broods after broods are vigorously evolved, literally loading the blood, overcrowding the capillaries all over the body, lungs, liver, spleen, causing infraction of the kidneys.

It is one of the most easily cultivated and recognized of all disease germs, it is pathogenic of the disease, for cultures injected into any mammalia reproduce the disease in all its malignancy.

The ptomaines of the anthrax cause often rapid death by embolism and decomposition of all the tissues. Those ptomaines are a most deadly alkaloid, so speedily does it poison the nervous system that death often takes place before any symptoms of the disease appears.

The sterilization and destruction of this germ is most difficult for it at once sets up destructive metamorphosis.

If recognized, bactericides internally and to the pustule unceasingly administered and applied.

For internal exhibition, salicylate soda, glycerite of ozone, peroxide of hydrogen, ozonized sulphur water, Chian turpentine mixture.

Locally to the pustule resorcin jelly, boroglycerite and papoid, creolin, ozone ointment,

FOR A MORE DETAILED DESCRIPTION OF THE MICROBE "ANTHRAX" VERY BEAUTIFULLY ILLUSTRATED, WITH AN ENUMERATION OF THE BEST REMEDIES AND METHODS FOR ITS COMPLETE ANNIHILATION AND ANTIDOTING ITS PTOMAINES, SEE PAGE 57 OF THE LARGE WORK ON BACTERIOLOGY.

Loss of voice. May be due to nervous degeneration; (organic form), disease germs located on the larynx, as tubercule, syphilitic, diphtheria; to a lack of cohesion of the nerve cells, or want of harmony between volition and exercise, as in clergymen; to cold; a weakened reflex centre, then teething, worms, masturbation, uterine or genital irritation. There is a peculiar alteration of the voice in sexual perversions or masturbation when it is squeaky.

In all cases, whatever the cause may be, it should be removed if possible; tonics, alteratives administered. Bactericides for the tubercular and syphilitic forms; Kepheline, chloride of gold, avena, coca, musk root for the nervous forms: worm remedies for those parasites; uterine and ovarian irritation, *aletris farinosa*; masturbation, *gelsemium* and *salix niger*, *passiflora incarnata*. In

all varieties stimulating germicides are of utility, as the nascent chloride of ammonia, thymol, menthol, boroglyceride, iodine, resorcin.

Apoplexy. Sudden loss of consciousness and voluntary motion from pressure originating within the cranium.

Varieties.—(1.) Nervous; no lesion found after death. (2.) *Sanguineous*, a hæmorrhage into the surface of the brain; blood or clot. (3.) *Serous*, the effusion of serum.

General Symptoms.—Vertigo; sense of pressure or weight about the head; choking, drowsiness, confusion of senses and ideas; unsteadiness of gait; flushing of the face or else paleness; epistaxis, constipation.

During the seizure in the sanguineous form the face flushes, congested pupils are contracted; in the other forms, pale, pulse variable, coma, stertorous breathing; pupils either dilated or contracted, or one dilated, the other contracted; difficulty in swallowing; incontinence of urine.

Apoplexy must be carefully diagnosed from the action of narcotic poisons, alcoholism, hysteria, uræmic coma, etc.

Remedies.—Aconite, belladonna, veratrum vir., passiflora incarnata, are the most beneficial. Dry cups to the nape of the neck and shoulders; stimulating enema; mustard to the extremities; warm water to the head; massage.

Loosen all light clothing about the neck; remove the patient to a cool place; keep the head and shoulders elevated; abundance of fresh air. As soon as he rallies, free action of bowels is necessary; meagre diet; he must carefully avoid fits of excitement, passion, sexual congress, exertion and changes of temperature, especially exposure to hot sun, hot baths, over-heated rooms and violent exercise.

Ascarides.—Pin or thread worm, or germs of intestinal worms, which inhabit the rectum and lower portion of the colon.

Various remedies internally, may be tried, such as aromatic sulphuric acid and quinine, collinsonia, hydrastis, bayberry, stone crop, resorcin, salol, naphthalin, but they are seldom of utility; enemata of the same agents into the rectum, a few drops added to a teaspoonful of warm water, used daily for six weeks till all the ova are dislodged, are most efficacious.

Ascites.—Abdominal dropsy is either a result of chronic peritonitis or disease of the liver, very easily recognized by the history of the case; the equable enlargement of the abdomen, by the sense of fluctuation; the sense of smothering in the recumbent posture, and if the bowels are emptied clearness on percussion.

To insure a removal of the fluid the patient must be placed either upon infusion of digitalis or tincture of strophanthus.

Then diuretics, diaphoretics, hydragogue cathartics should be used. (See Dropsy.)

Asphyxia.—Suspended animation produced by the non-conversion of venous blood of the lungs into arterial—owing to the supply of air being cut off, the unchanged venous blood of the pulmonary artery passes into the minute radicles of the pulmonary vein. Their peculiar physiological construction requires arterial blood to excite them. Stagnation takes place in the pulmonary capillaries, death follows from this cause, that is from the want of arterial blood.

Whatever be the cause, drowning, strangulation, hanging, inhalation of gases, after getting rid of the water or gas, artificial respiration should be tried—electricity, positive pole over medulla oblongata, negative over diaphragm: enemata of comp. oxygen or glucosone or peroxide of hydrogen per rectum. Drop doses of one per cent. solution of nitroglycerine on tip of the tongue very effective.

A spasmodic, nervous disease, consisting of an
Asthma. irritation of the nerves that supply the circular muscular fibres of the bronchi; peculiar types of conformation; morbid states of the blood; disease germs; irritation; reflected, peculiar affinities of constitution for certain localities. Attacks come on when the electrical condition of the atmosphere is low—at low 12; usually ushered in with languor, drowsiness, gasping anxiety, rushing to a door or window for air, impending sense of suffocation, sibilant murmurs or relaxation of the heart.

Compound lobelia, bromide potassa, calabar bean, rosin weed, musk root extract, ozone, sulphur, grindelia, coca, nitro-glycerine, fumes of nitre paper or acro-narcotics, nitrite of amyl, euphorbia pil. passiflora incar.

Take equal parts by weight, finely powdered, well mixed and sifted, of lobelia, stramonium leaves, nitrate of potash. Small doses repeated at short intervals, till symptoms disappear. Try resorcin.

Keep the atmosphere of the room moist. Relieve paroxysm by cup of strong coffee, lobelia, inhalation of nitrite amyl; alteratives and tonics, coca, nitro-glycerine, chloroform, fumes of stramonium and nitrate paper, flannel clothing.

Usually due to a draining of the nervo-vital
Atrophy of Brain. fluid either in masturbation or sexual excesses or being deprived of sleep, use of whiskey, old age. Brain shrinks, shrivels, becomes small, intellectual faculties childish.

Best remedies are glycerite of kephaline, cerebrin, avena sativa, coca, passiflora incarnata, massage, electricity.

Best food, oatmeal, wheat and grits, boiled whitelish, with abundance of animal and vegetable substances.

Usually due to excessive sexual indulgence, unnatural coition with prostitute, or perversion of sexual appetite. Local bathing, electricity, protogan liniment; internally, saw palmetto, kephalline, avena sativa, passiflora incarnata.

Bacteria of Rhinoscleroma

are rod shaped, one and one-half times longer than they are broad. Their location is the nose, skin and mucous membrane and contiguous parts, the colonies of neoplasm form either flat or elevated dense ivory nodules.

The microbe is pathogenic of the disease, they bear cultivation well in any nutrient fluid, the cultures injected into animals give rise to the same ivory nasal deposit.

The germ and its broods are sterilized in the presence of the peroxide of hydrogen and Chian turpentine emulsion.

Locally, ozone ointment and resorcin: boroglyceride and creolin; benzoated ointment and naphthaline.

Bacillus of Cancer.

Cancer may be defined as a morbid condition of the nervous system in which the bacillus of cancer is evolved in the blood, and assumes the diagnostic heart-shaped, spindle-shaped rods.

They originate from degraded bioplasm, or irritated protoplasm. Such irritation may be either direct or indirect, through the medium of the central nervous system.

If there be no local weakness, or irritation, this microbe may exist in the blood indefinitely, poisoning the streams of life, but when any part is damaged, or weakened, blood vessels relaxed, the microbe passes by exosmosis through its walls, into the adjacent parts, in which it grows with varying degrees of rapidity, depending a good deal upon the amount of local depression, and on the presence of certain adventitious substances.

When this bacillus is exuded, or deposited, or effused into any part, *pain*, of a sharp lancinating character, occurring in paroxysms is present—the intensity of the pain, its frequency of occurrence and duration depend upon the amount and activity of the microbe.

The lymphatics, in close proximity to the germ mass, tumor or infiltration, affords an excellent criterion, index or barometer of the malignancy of the bacillus.

Germ aggregation, or tumor receives different names according to its composition—presence of certain constituents; *scirrhus*, when the germ is tangled up in fibrous tissue; *medullary*, soft like brain consisting almost exclusively of cancer cells; *sarcoma*, fleshy; when thrown out with a large network of blood vessels fungus hæmatodes; *epithelioma*, where skin and mucous membrane meet; black pigment, melanotic.

The bacillus of cancer in the blood is best recognized with a high microscopic power of 2500 diameters. heart and spindle-

shaped forms, ovoid bodies, arranged in pairs or heaps, their length being a fourth less than a blood corpuscle.

The microbe is pathogenic of all forms of carcinoma, bears culture well on coagulated blood kept at the temperature of the body.

Cultures injected into animals give rise to a typical form of cancer. It is therefore highly contagious and infectious, very prevalent among our domestic animals, in precisely the same forms as the human being.

The microbe is difficult to sterilize and annihilate.

Its local destruction should be effected either with chloride of chromium paste; or ozone paste; resorcin ointment; lactic acid C. P., liquid chloride of chromium.

The bacillus in the blood should be sterilized with either saxifraga, phytolacca, Chian turpentine mistura, glycerite of sulphur, dioxide of hydrogen, red clover.

For a full description of the cancer germ see page 122 of the large work on Bacteriology.

Inflammation of the internal lining membrane
Balanitis. of the prepuce and covering of the corona glandis.

May be caused by masturbation, the presence of smegma; leucorrheal and gonorrheal discharges.

Rest, open bowels, retract foreskin and apply either a lotion of lime water and tincture of iodine; or boroglyceride; or sulphur water; permanganate potassa.

Gall stones are usually concretions of
Biliary Calculi. bile or some of its constituents; sometimes

merely hardened bile, others a crystallization. There may be one or a vast number of stones, from a large size down to a millet seed; their passage from the gall duct into the bowel is attended with pain, severe, occurring in paroxysms, shooting from the liver to the back; nausea, vomiting. If the stone is large, great prostration, patient faints, doubled-up position, pain moves as the stone moves; when it drops into the bowel all symptoms at once disappear as if by magic.

Gives rise to jaundice.

Remedies.—During the attack, gelsemium with plenty of sweet oil; nitro-muriatic acid; phosphate of soda; alkalies, nux, sulphur.

General Measures.—The large doses of the gelsemium, during the attack, relax the gall duct and its duct with the bowel and set free the calculi; also hot fomentations of lobelia; warm alkaline baths; nothing like olive oil to favor the passage. Inhalation of chloroform; concentrated ozone over the liver; hot bath.

Diet.—Abstain from fatty, starchy, saccharine diet, also animal food and malt liquors.

Brain Congestion. A determination of blood to the brain is caused by study, brain work, excesses of all kinds, mechanical violence, climate, exposures to sun's rays, poisons, struggle, passion, worry, certain drugs, etc.—all cause weakness, relaxation of tissues, fissures, capillary structure.

Its diagnosis is, headache aggravated by noise, heat, light, motion; intolerance of light, face red, throbbing of the carotids, sudden jerks and starts, tingling and pricking of the extremities, hot, dry skin, excitement, insomnia, confusion of senses, arrested secretion.

Treat same as brain inflammation, with *passiflora incarnata* between each dose.

Brain Shocks. Concussion, stunning, sudden interruption of the functions of the brain, caused by a fall or blow; insensibility in various degrees; surface pale, cold, slow breathing, vomiting.

The Treatment should be stimulating till reaction sets in perfect, with warmth to the surface of the feet; mental and bodily repose; compression from extravasations of blood on general principles. *Passiflora* will be found of good value.

Brain Inflammation. Inflammation of the substances of the brain and its membranes co-exist; often difficult to say which, or even what particular part is affected. Causes the same as congestion; usually violent rigors and intense headache, aggravated by noise, light, heat, motion; redness of face and eyes, pupils contracted, later on dilated; senses impaired; secretions arrested; insomnia; neuralgic pains; tingling and formication in body and limbs; chronic spasms or convulsions; delirium, coma, insensibility, paralysis.

The most vital organ in the body being smitten, there is great danger from exhaustion of nerve force, collapse, apoplexy, softening, induration, abscess.

Prognosis.—Unfavorable if there be tonic spasms, difficult deglutition, incontinence of urine and feces, stertorous breathing, stupor, coma.

Remedies.—Free purgation; large and oft-repeated doses of veratrum vir., full and persistent doses of hyoscyamus with *passiflora incarnata* until sleep is induced. Shave the head; pack it in cloths wrung out of warm water or cloths wrung out of warm vinegar in which hops are stewed; dry cups at the nape of the neck and over the shoulders; a roller saturated with wet mustard to the feet and limbs, with heat.

General Measures.—Place the patient in the coolest, most airy room in the dwelling; no noise, no light; elevate his head and shoulders. Be scrupulously careful to keep the patient free

from all excitement or disturbance. Bathe or sponge off the entire surface daily.

Diet.—Gruel, barley water. Subsequently very light nourishment.

General Remarks.—Treatment active, so to prevent effusion into substance of the brain (red ramollissement) or chronic inflammation, which is apt to terminate in white softening. In all cases alteratives and tonics; enough of hyoscyamus administered to induce sleep, if it fails *passiflora incarnata*; secretions active. Stimulants to feet, small blisters to nape of neck; no noise, worry, care, nor excitement; any exaltation of mental activity, restlessness; dejection must be relieved.

Brain, with Tubercular Bacilli on its membranes and substance.

Usually an affection of childhood, most prevalent in summer months, easily induced in children by some reflex irritation, as teething, worms, diarrhoea, cholera infantum, and consists in a deposit of the bacilli of tubercle from the blood in or on the surface of the brain or its membranes. It is preceded and accompanied with great irritability and peevishness, crying, screaming, rolling the head, eyes partially open during sleep, emaciation, paleness, listlessness, cough, disorders of stomach and bowels, stools green or chopped spinach appearance, vomiting, diarrhoea or constipation. The same headache apparent as in acute inflammation; fever, very rapid, high temperature. Later on the pulse slow, respiration irregular, stupor, delirium, pupils dilated, senses impaired, spasms or convulsions, clinching of the jaws, contortion of features, partial or complete paralysis.

Treatment.—Stimulating lotions of chloride of ammonia and camphor to the head, or ointment of aristol; dry mustard to the feet and legs, placed in the socks. Open the bowels freely with comp. syrup rhubarb and potassa, and administer aconite and belladonna for fever; hop pillow or hop mattress, over which has been sprinkled concentrated ozone, for sleep. As soon as the fever is controlled use glycerite of ozone in small doses, to destroy germs, and *passiflora* to control restlessness. Depression of vital power to be overcome as far as possible by juice of raw beef, pure milk, sea air. Watch symptoms and control them. Sulphate chinchona for tonic. Any spasm or convulsion to be promptly checked by the administration of comp. lobelia, bromide potassa, fluid extract sumbul ozonized, glycerite of ozone. Hydrocephalus liable to follow if it continues long.

The cerebral diseases of childhood are simple inflammation of the brain from falls; cerebral congestions from convulsions. They are more liable than adults to structural disease, having but one table of the skull, no diploetic structure.

Milk is often met with in the breasts of infants
Breast. at birth. Saturate a piece of lint with tincture of belladonna and apply.

Excessive Secretion of Milk.—Apply belladonna; keep the bowels open by use of salines, iodide potass.

Deficiency of Secretion of Milk.—Use castor oil, internally and externally; lotion of calabar bean, salicylate soda, malt, pilocarpine, ditana digitipolia, favor secretion locally by electricity.

Diet.—The patient should have an abundance of nutritious food, which is easily digested, such as milk, fish, poultry, fresh meat, carrots, beets and parsnips, eggs, broths and all wholesome food that the appetite may crave; malt liquors are injurious.

Sore Nipples.—The nipples should be bathed daily for two months before parturition, with tincture of hydrastis or arnica, or tannic acid solution. After each nursing of child, the nipple should be bathed with lotion of boroglyceride. If they are sore (*oidium albicans*), in ulcers, extremely infectious; bathe nipples with boroglyceride; wash the child's mouth with the same.

Bronchitis, Acute and Chronic. The Microbe.

In the process of acute and chronic inflammation of the lining membrane of the bronchi, there is evolved a microbe which gives rise to depression, cough, expectoration, difficulty of breathing and imperfect oxygenation of blood.

The presence of this microbe on and in the lining membrane of the bronchi gives rise to irritative hacking cough, dyspnoea in the early stage or rhonchus and sibilus; which later changes to large and small crepitation, with copious expectoration, slate colored sputum and nails, due to the microbe in the blood and to the non-aeration of the blood.

The microbe is found most abundant in the sputum of old chronic cases. It bears cultivation well in liquid gelatine; cultures injected into animals give rise to the cadaverous cough, and the decided prostration invariably present in all cases.

The micro-organism is imbedded in tufts or patches of the bronchial mucous membrane, difficult to reach by inhalation, but by a little strong perseverance, it is sterilized either in the presence of the nascent chloride of ammonia, or creosote, or peroxide of hydrogen.

In the chronic bronchitis of old age we speak favorably of inhalations of menthol, which, not only facilitate and rapidly diminish the expectoration, but also delay the cough and reduce the number of paroxysms. These inhalations have also been used with good effect in whooping-cough. Finally the same mode of application has proved useful in our hands in relieving asthma. A case occurs for which all the usual and most of the

unusual remedies had been tried unsuccessfully. Inhalations of a twenty per cent. solution in olive oil were then tried, with the most satisfactory results—the rattling rales disappeared almost immediately and the respiration soon became normal. An excellent tonic: take four ounces each of the acetic syrup of blood root and the same of lobelia; to which add four drachms of pulverized alum and chlorate of potass. Mix; dose: From a half to one teaspoonful, added to water, every three hours. It is excellent to relieve cough and sterilize germs.

Keep patient at all times inhaling a pure antiseptic atmosphere.

The microbe is completely annihilated in the syrup of tolu, salicylate, acid in acetate of ammonia, resorcin, muriate of ammonia. The best tonics are kepheline, *avena sativa*.

The Acute Form is generally due to cold or inhalation of irritants, and is usually confined to the lining-membrane of the bronchi. There is usually catarrh, rigors, fever, lassitude, sense of soreness in chest, nervousness, uneasiness, constriction of the chest, dry cough as the inflammatory stage merges into effusion; expectoration of thin, viscid mucus, then muco-purulent matter; difficulty of breathing, debility; dry rales or sounds over the large trunk (*rhonchus*), over the small tubes (*sibilant*); when effusion, moist rales, termed respectively large and small crepitation.

Deficient aeration of blood, pneumonia.

Remedies.—Aconite, thalline and lobelia can be relied upon in dangerous cases; *veratrum vir.*; muriate of ammonia; quinine, ipecac, squills, senega, tolu, moist antiseptic atmosphere.

General Measures.—Same as in pneumonia.

The Chronic Form may be a sequel of the acute, then it is simple, but it may be due to the presence of germs, then it is termed *syphilitic, tubercular, mercurial, gouty, rheumatic*, irritating agents, as mine dust, cotton.

Symptoms in common—Cough, with expectoration of viscid muco-purulent matter, often greenish; great tightness of chest, emaciation, debility; lungs clear from top to bottom.

Remedies.—Prunella, coca et celerina, ammonia, kepheline, *avena sativa*, sumbul, tar syrup ozonized; general alterative and tonic course; in addition, mineral acids and cinchona. Let some preparation of sulphur predominate in all cough mixtures, to kill germs; beneficial effects from tannin, syrup of tolu.

General Measures.—Great difficulty of breathing, use hot fermentations to the chest; they often afford relief. Renew frequently. Guaiacol plaster over anterior and posterior portion of the chest.

Bronchocele.—Goitre, enlargement of the thyroid gland may occur in a variety of forms, from a simple puffy swelling, cystic degeneration, effusion of fibrous tissue, the colonization of the bacillus of tubercle and cancer and usurpation of the entire gland with calcareous particles, one or both lobes may be affected.

The exciting causes are irritation reflected from the genito-urinary organs, as the gonococcus in either case, masturbation, perversion of the sexual act, testicular and ovarian irritation, which give rise to aphonia, squeaky voice. Drinking snow or ice water has same effect.

In the treatment, removal of causes, alteratives and tonics, especially preparation of iodine, iodoform, iodol, aristol.

Adenitis, the term is confined to irritation, inflammation of the lymphatics of the groin.

Bubo. *m*ation of the lymphatics of the groin.

Two varieties, one due to simple irritation, the other to the migration of the venereal bacilli from some adjacent part.

If due to simple irritation, enjoin rest, regulated secretions, apply locally either plantain leaves with compression, or iodide cadmium oint. Phytolacca orally, iodoform, or iodide potassa in comp. saxifraga; if rigors, pain, throbbing, then poultice, until suppuration is complete; free incision, wash out with peroxide of hydrogen. If due to the presence of the venereal bacillus, poultices, free incision and counter incisions, germicides.

are usually classified according to their degree:

Burns (1) Erythema, or redness of the skin; (2) Vesication, blisters; (3) Ulceration.

Prognosis.—If one-half or one-third of the surface is deeply scalded, death is almost inevitable from serous congestion of the brain, chest or abdomen; otherwise the location, intensity, nature of medium, age, temperament and constitution of the patient will modify our prognosis.

Treatment local—ozone ointment, olive oil and carbolic acid; flour and lard in equal parts; white lead, paint: equal parts linseed oil and lime water. Dress so as to exclude the air; destroy germs and stimulate the parts affected. No dressing equals the ozone ointment. *It heals*, and prevents scars and deformities.

FOR A MORE ELABORATE DESCRIPTION OF THE "CONFERVA" THE PATHOGENIC MICROBE OF BRONCHIITIS, NEWER POINTS IN TREATMENT WITH BACTERICIDES, SEE PAGE 96, OF THE LARGE WORK ON BACTERIOLOGY.

Also another good formula.—Take a saturated solution of boroglyceride, one quart: carbolic acid, one drachm; muriate cocaine, ten grains. Mix. Shake well; saturate cotton and apply. Cover with oiled silk; re-saturate cotton every three hours.

Calculi, posed of uric acid, phosphate and oxalate of
Urinary. lime.

The diagnosis of calculi in the kidney is often difficult, although it may be suspected if there are pains in the loins after exercise; persistent traces of pus in the urine, occasional attacks of hæmaturia.

When a calculus drops into the ureter, there is intense pain, nausea, vomiting—these symptoms should be relieved by gelsemium, warm hip baths, hot fomentations to the loins and abdomen. If gelsemium does not relieve, add lobelia; give infusion of lobelia and opium: drink large quantities of mucilaginous liquids during the attack, with liquor citrate of potassa.

While the stone is either in the kidney or bladder, it can be greatly diminished in size—often disintegrated by the uric acid solvent, hydrangea, nitro-muriatic acid, ozone water; pichi; dioxide of hydrogen.

Cancer. ysmal attacks of pain of a sharp lancinating
See Bacillus character—slight in degree and at long inter-
Carcinoma. vals apart, if few micro-organisms be present;

but if there be a very large aggregation of germs present in the infiltration or swelling, the pain is intense and of frequent occurrence—if the cancer be open, a sense of soreness or rawness also exists; if the colony of cancer germs be in the chest or abdomen, pain anterior and posterior over the part.

When this pathogenic microbe is present in the blood, it gives rise to anæmia, pearly conjunctiva, sallow, dry, husky skin; an indefinable sense of debility or goneness; very irritable heart; clay-colored stools. Cancer microbes in the breath and discharge emit a peculiar odor resembling the hydrosulphate of ammonia, enlargement of the lymphatics in close proximity to the infiltration of germs.

Prognosis.—In forming a prognosis of any given case of cancer, we must bear in mind, that, up to the present date, the tendency of all cases is to death—that the medullary form, being acute, is especially malignant and rapid in its course—that all cancerous growths are more rapidly fatal when such vital and vascular organs as the stomach, tongue, uterus, rectum, are the seat of deposit. The size or degree of enlargement of the lymphatics in closest proximity to the infiltration is the best criterion to go by; if they are no larger than a pea, the future progress of the case under ordinary bactericide remedies is

likely to be favorable, *whereas*, if they are as large as a pigeon's egg, decidedly unfavorable.

As cancer is a microbial affection it is necessarily both contagious and infectious.

The indications of treatment of all cases of cancer are to either destroy the bacillus in the blood; to correct the defect by which the neoplasm is evolved in the blood; to build up vital force, and if there be an infiltration or tumor, get rid of it either by the local or internal exhibitions of bactericides.

In the observing of these indications the general health must be improved by every means, change of locality; daily baths, plain and medicated with either iodine or nitro-muriatic acid; bowels should be kept regular; appetite stimulated and a diet rich in all the elements of blood should be the standard—even the use of either malt liquors or wines, at meals is to be commended; if indigestion prevail, ozonized pepsin and other digestive ferments administered.

There are a few bactericides which, when administered internally, have a marked destructive action upon the microbes in the blood, two of those should be selected and given in alternately appropriate doses, say for one week, and two selected for the following week. Those which act most energetically to be preferred; our best remedies are comp. saxifraga and phytolacca, ozonized Chian turpentine mistura; condurango, glycerite of sulphur, dioxide of hydrogen, resorcin.

With regard to local treatment, if the aggregation of germs be small, skin sound, not discolored, an effort might be made by the endosmosis of remedies to either sterilize, kill, and absorb the mass. For this purpose some one of the following might be selected, and applied either continuously or in alternation, viz.: Belladonna ointment and salicylate soda; boroglyceride and papoid; ozone ointment and resorcin; succus phytolacca, red clover, sheep sorrel; a plaster of clover root and hydrastine, with chromium, ozonized iodine; siegesbeckie; even spraying with peroxide of hydrogen.

All cancerous infiltrations or tumors, if not removed by some of the above or other methods, must be removed by a bactericide sufficiently powerful to destroy the germ colony, either by uniting with it, or oxidizing it, and causing a line of demarcation to form between the healthy tissue and the cancerous mass, such a process is effected by the chloride of chromium paste; or ozone paste, lactic acid.

The use of arsenic, chloride of zinc, platinum, bi-chloride of mercury and other escharotics is now discarded by all scientific specialists.

When an effusion of the bacilli of

Cancer of the Arm. cancer takes place on the arm, shoulder, leg, etc., its location permits of the most energetic course of treatment. Either the

chloride of chromium or the ozone paste should be applied fresh every morning until it drops out entire. During this process the adjacent parts should be carefully protected, and the sensibilities of the patient blunted by the administration of the comp. conium pill.

If it does not drop out freely, the roots or prolongations should be touched with a camel-hair brush, dipped in a little of the same paste made liquid by adding a few drops of water. If the cavity is large, strips of salicylate plaster should be applied over it, so as to aid rapid cicatrization. Ozone ointment makes a useful dressing for all cases.

Most common among ladies

Cancer of the Breast. near by, during and after the change of life; more rarely met

with among men, and when it takes place in the latter sex, generally a scirrhus infiltration around the nipple due to the irritation of the buckle of the suspender.

The left breast of the female being the weaker, covered freely with the sympathetic, the bacilli makes an entrance into it and breeds with a rapidity corresponding to the vital integrity of the part. All forms of cancer are met with here, epithelioma of the nipple, scirrhus and medullary.

Easily diagnosed by the pain, enlargement of the lymphatics in the axillæ, numbness of the arm of the affected side, retraction and oozing from the nipple, cachexia.

Constitutional treatment with bactericides,—if small, remedies by endosmosis to kill and absorb the germ; if tumor is large, it must be removed with chloride of chromium or ozone paste, blunting the patient's sensibilities with comp. conium pill.

Usual treatment constitutionally;

Cancer of the Eye. small tumors may be got rid of by going round and round it with a pen

dipped in the *super-sulphate of zinc, touching the parts daily but lightly, producing no irritation. In the interim applying lotion of boroglyceride, when it drops out.

Patches on the forehead and face may be removed in the same manner.

Careful removal with either the

Cancer of the Lips and Face. chloride of chromium, or ozone paste; or with the super-sulphate of zinc, going round it every morning. After

it is completely removed, one or two or more hair lip pins to keep the parts in apposition and promote cicatrization.

Usual internal treatment.

* Super-sulphate of zinc is prepared by saturating C. P. sulphuric acid with sulphate of zinc.

Cancer of the Esophagus. Digest the cancerous infiltration of the circular rings by the introduction of a paste of boroglyceride and papoid in a strength suitable for the purpose.

Cancer of Penis. As cancer is both contagious and infectious, it follows that men having sexual congress with ladies, who either have the cachexia, or worse still who have a cancerous infiltration of the neck of the uterus, the germs during coition are apt to migrate from the microbe-smitten uterus to the corona glandis, which is one of the most sensitive, highly organized and actively absorbent tissues in the whole body.

Nearly all cases of cancer of the penis can be traced to direct inoculation. The victims are usually the old devotees of masturbation, or dalliance in the sexual act.

It is generally ushered in with a hard, brawny state of the corona, which assumes the form of large scales; later scirrhus and medullary infiltration, involving the entire organ.

Most amenable to treatment with bactericides, boroglyceride paste, resorcin ointment, brushing with lactic acid.

All means failing, its removal with the chloride of chromium or ozone paste. The usual internal remedies.

Cancer of the Rectum. In the early stages the microbe puts in an appearance in the form of an epithelioma, at the verge of the anus; later on in the form of vertical streaks of scirrhus, and later still the entire rectum becomes filled with a medullary or adenoid substance. The pain anterior and posterior, diarrhoea, hemorrhages, cachexia and other landmarks, which are readily seen and felt.

The most excellent results have followed the introduction daily of rectal bougies, composed of papoid and boroglyceride; creolin and lactic acid have also been successful; aristol and the glucoside of stone crop.

The powdered jequirity by insufflation is often of utility in causing an exfoliation of the mass of diseased germs—iodol and other remedies used in the same manner.

The rectum, before any powder is applied, should be well washed out, the dry or powdered treatment is most successful in a large number of cases.

Cancer of Stomach. This is recognized by cachexia; the pain anterior and posterior; nausea, vomiting; in vomit cancer germs.

No case of cancer of the stomach should be given up until the local application of the ozonized clay and conium pill has been thoroughly tested and a fair trial of papoid or trypsin. The very remarkable solvent powers of these two remedies upon diphtheric effusions, upon all recently organized tumors or ex-

crescences, merit the attention of the profession and mark a new era in therapeutics.

With the ozonized clay externally, giving out its germicidal properties by endosmosis, and either of those remedies internally, cancer of the stomach becomes amenable to treatment.

A liquid, highly animalized diet should be given.

Most generally appears among

Cancer of the Tongue. men who are inveterate smokers.

All forms are met with—epithe-

lioma, scirrhus, medullary.

Each form requires the application of special remedies adapted to the special microbial condition present.

When the tongue is patchy, exfoliates large or small scales, brushing it over with either dilute lactic acid or an ozonized distillation of jequirity, or steeping it in a saturated solution of chlorate of carbon for twenty minutes thrice daily, or a solution of hydrastinine, peroxide of hydrogen has also proved itself of utility.

When the case has proceeded onwards to ulceration, either of its centre or edges, the C. P. lactic acid may be tried, that failing and the cancerous mass accessible, the ozone paste might be applied with great care.

In the more aggravated types a portion or the entire tongue may be removed. When this is deemed advisable, to be attended with success, it must be done early.

Common at all periods of

Cancer of the Uterus. uterine activity, but especially so at the cessation of the menses. It is

met with in a variety of forms, as adenoma, springing from some part of the internal walls, often filling the entire cavity of the uterus and passing off in glandular pieces, often accompanied with violent hemorrhage and anæmic conditions—epithelioma, scirrhus infiltration, or medullary exudation at os and neck, penetrating upwards to the body of the uterus.

It is easily recognized by the pain anterior and posterior; muco-purulent discharge loaded with cancer cells; the peculiar odor of the discharge; often sanguineous—at other times exhausting hemorrhages. Ocular and digital examination of the os, neck and body, as far as practicable, reveals the true state of the parts.

Nearly all cases admit of great palliation, if not of cure.

The Chian turpentine mixture and the glycerite of sulphur are most admirable and effective remedies in all forms of uterine cancer.

Cases in which the cancer bacilli imbedded in a glandular mass sprouts from and occupies the cavity of the uterus, are much, very much ameliorated by the introduction of gelatinized bougies, prepared from either resorcin, or iodol, or creolin, introduced into the cavity of the uterus and permitted to remain—same

remedies could be introduced into the cavity of the uterus with a syphon syringe—introduced and withdrawn.

If the microbe has invaded the os and neck, pastilles of boroglyceride and cocaine might be tried; where it is deemed advisable to cause exfoliation, the jequirity paste, or better still the powder by insufflation, is better if there be an erosion of the os and cervix.

The dry treatment of cancerous infiltration is good. The vagina should in all cases be washed out to remove the secretion thoroughly, previous to the application of the powder, and the dry powder laid right on the affected part; repeated applications about every five days will gradually cause exfoliation of the germ mass.

If the germs have infiltrated the os, neck and body of the uterus, the application of the jequirity may not be sufficient to cause it to exfoliate, then about every 5 to 7 days C. P. lactic acid may be brushed over it, and every night the vagina packed with boroglycerite paste, or if the germs are still deeper seated, some more penetrating application should be utilized, as the chloride of chromium or ozone paste liquefied to the consistence of cream and applied. Great care must be exercised not to touch the sound parts, peroxide of hydrogen as a local application is often invaluable. Papoid, if the case admits of its use.

Hæmorrhage in all cases most effectually controlled by the administration of ergot.

With a liberal use of the Chian turpentine mixture and glycerite of sulphur, vaginal injections of resorcin, no physician need fear to do wonders in the way of cure.

FOR A MORE ELABORATE DESCRIPTION OF THE BACILLUS OF CANCER, BEAUTIFULLY ILLUSTRATED, WITH AN ENUMERATION OF THE NEWER REMEDIES, THE BEST METHOD OF THEIR EXHIBITION FOR KILLING THE MICROBE AND NEUTRALIZING ITS PTOMAIN, SEE PAGE 394 OF THE LARGE WORK ON BACTERIOLOGY.

Caries et Necrosis.

Bacillus of Saprogenes.

When lymph is once effused into a bone and a suppurative process sets in, or gangrene takes place, there is evolved in the discharge a three-rod-formed organism which is invariably present in all putrefactive changes in bone; this microbe is readily procurable from necrosed bone, and if placed in blood serum grows most luxuriantly. All cultivations yield the microbe, with the peculiar odor of rotten kitchen refuse.

Those cultures injected into animals give rise to precisely the same putrefactive changes in their bones.

In all cases if there are several sinuses or openings, they should be run into one and the parts washed out with glucozone, and

either that or the peroxide of hydrogen kept constantly applied ; other bactericides may be used as resorcin, creolin.

FOR A MORE DETAILED DESCRIPTION OF THIS GERM, SEE PAGE 397 LARGE WORK ON "BACTERIOLOGY."

**Caries of the Dental Pulp.
The microbe.**

The almost universal and early decay of the teeth is due in a great measure to early precocity, to the increasing demands made upon premature brains, to tissue starved brains from adulterated food ; the use of hot and cold drinks. Indigestion ; formation of lactic acid, degrade the elementary molecules into a polymorphic bacillus, which is pathogenic of the disease

The bacillus bears cultivation best in beef tea to which a little sulphate of lime is added.

Inoculation into animals gives rise to tooth caries, and so very infectious is it that one carious tooth will contaminate a mouthful.

The microbe becomes sterilized in the presence of either the anti-microbe powder ; boroglyceride ; soap-tree bark, and peroxide of hydrogen ; and all of the aromatics.

A superficial inflammation of the follicles of a mucus membrane, with an excessive discharge of mucus, in which primary protoplasmic elements are changed, altered, degraded into other living matter, with new and independent powers of existence. For example in

Catarrh of the Bladder, elementary molecules changed into the *micrococcus*urea and pus microbe*.

Catarrh of the Bronchial Tubes, degraded bioplasm, the *conferva*.

Catarrh Nasal. Millions of *Amaba* evolved every hour.

Catarrh Stomach and Bowels. *Sarcinæ* ventriculi of every type.

Catarrh of the Uterus. Almost any form can be detected in this organ.

The general treatment of all consists in a rigid, active course of alteratives, tonics, all of a microbicidal character, and in all cases a local bactericide to kill the neoplasm.

For catarrh of the bladder try injecting the bladder three times a week with a solution either of boroglyceride, or resorcin or creolin ; internally uric acid solvent, pichi ; uva ursi, mineral acids, stone crop.

For bronchial catarrh, try chloride of ammonia, terebene, coca, syrup tolu ozonized ; glucozone, balsam peru, cubebs, either inhaled or orally or both.

For nasal catarrh, try ozone et chlorine, weak ; resorcin, creolin, boroglyceride by douche.

For gastric and bowel catarrh, Virginia stone crop, collinsonia, glucozone, sulphide of lime, salol, naphthalin.

For uterine catarrh. Bougies of iodol, boroglyceride, thallin with vaginal injections thrice daily of either creolin or boroglyceride and aleteris farinosa internally.

Cerebro-Spinal Meningitis.

The Streptococcus.

Or spotted fever, may be defined to be a fever due to the presence of a streptococcus and its ptomaine in the blood.

Its diagnostic points are the history of the case, epidemic and endemic, the stage of collapse, rigors, fever, with stupor, coma, opisthotonos, convulsions or spasms, delirium.

A microscopical examination of the breath, tongue scrapings, blood, demonstrates the presence of a microbe in the blood, which appears in the form of cocci; diplococci and chains—these are most abundant in the cerebro-spinal fluid, base of brain, around the medulla oblongata, spinal cord; zooglœa are found in the spleen, liver, kidneys. The alkaloid ptomaine excreta is not only toxic but highly tetanizing—usually causing death in less than seven days,

The microbe is pathogenic—bears culture well in an infusion of wheaten grits or oat-meal.

The general principles for a highly contagious and infectious fever should be inculcated—bathing, antiseptis, nutrition, with the most powerful stimulants to the cerebro-spinal axis, or else chloroform and peroxide.

The microbe of this fever is difficult to sterilize or annihilate. Our best remedies are veratrum viride, scullcap, calabar bean, gelsemium in combination, alternated with either peroxide of hydrogen, resorcin, sulphur water.

Recent bacteriological remedies demonstrate that this streptococcus is morphologically and biologically identical, without and ever present in inflammation of the cortical substance of the brain.

FOR A MORE DETAILED DESCRIPTION OF THE STREPTOCOCCUS OF CEREBRO-SPINAL MENINGITIS OR SPOTTED FEVER, WITH AN ILLUSTRATION OF THE GERM, NEW POINTS IN TREATMENT WITH MICROBICIDES, SEE PAGE 354 OF THE LARGE WORK ON BACTERIOLOGY.

Cessation of the Menses.

Due to change of life; usually about the age of forty-five, sooner or later; nearly all cases are attended with flushes of heat, colds, nervous prostration, uterine hæmorrhage, organic diseases of the uterus and ovaries, inflammation, apoplexy, palsy, insanity, dyspepsia, cutaneous affections, ulcers, giddiness, roaring in the ears, specks and spots before the eyes, debility, etc.

Remedies.—The patient must be tided over the crisis by careful management, change of scene, best of food, flannel clothing; for the hot flushes, so common and distressing, port wine, Peruvian bark and aromatic sulphuric acid. Coca is excellent, as it causes a cohesion of nerve force; aletris cordial and prunia, invaluable; special remedies to meet the indications.

An aggregation or a colony of the venereal **Chancres.** bacillus, either in the skin and subcutaneous tissue or in the mucous membrane. They are generally met on the organs of generation of either sex, as the penis, vagina, uterus, also on the lips, arms, fingers.

Two varieties, hard or infecting, soft or non-infecting.

Recognized by the following landmarks: *the hard infecting chancre* is generally oval or round, scooped out; on grasping it between the finger and thumb, it feels as if there was a piece of cartilage in its base; if any, the discharge is scanty; the soft non-infecting chancre is round, has a copious discharge, has no hardness or cartilaginous sensation; the infecting gives rise to systemic syphilis; the non-infecting, the microbe is incapable of affecting the blood.

The old treatment of chancres is discarded since its microbial nature has been discovered.

They are now treated with lotions of lime water and tincture of iodine, or sulphur water, or with powders iodol, aristol.

Sexual neurasthenia in the young of both

Cholorosis. sexes, which gives rise to grave pathological

Green Sickness. changes in the blood and nervous system.

Best treatment consists in bathing, massage, well regulated secretions and a persistent administration of brain tonics, as coca et celerina, glycerite of kephaline, avena, etc.

The comma-bacillus, the microbe of

Cholera, the cholera, appears in the stools in three grades
Comma-Bacillus. of diarrhoea, to wit, infantum, morbus and epidemic cholera. The evolution of this potent microbe in the human intestines is due to bad food and water, solar heat, insanitary states, meteorological atmospheric states, and a deficiency of positive ozone in the surroundings.

In its three forms it is easy of recognition—prostration, pallor, sharp features, wiry pulse, lowered temperature, breath cold, contracted pupils; blueness of ears, nose, nails; frequent painful evacuations from bowels, preceded with intense paroxysmal pain, due to the microbial excretion of ptomaines, and less or more muscular contraction, or rigid spasm, and the appearance of the microbe in the stools.

The comma-bacillus, consists of carved rods, spirilla and threads. The curved rods or commas occur isolated, or in masses, or attached to each other, forming S-shaped organisms, or long screw forms. The commas are actively motile, extremely rapid

in development, and excrete a most deadly tetanizing ptomaine in great abundance. The microbe throws off those alkaloid poisons, ptomaine, in the superficial necrosed layer of the bowels; in the mucous flakes and liquid contents of the intestinal canal. In the infantile form the microbe is small, not such an active ptomaine breeder; in the morbus larger; in the epidemic form a full-fledged microbe, with prodigious powers of reproduction and a ptomaine excretion so great that it may cause death before the germ itself has time to enter the blood.

The comma bacillus bears artificial cultivation well in any rich broth; cultures injected subcutaneously or fed to animals give rise to the disease, and either the chopped-spinach or rice-water stools.

The sterilization or complete annihilation of the germ is of the greatest importance. This is often difficult in well marked cases, owing to the tetanized state of the muscles. This must be overcome by the application of dry heat to the entire body, with concentrated ozone and chloroform over the entire abdomen, and the internal administration of small, but oft-repeated doses of a mixture of equal parts of tincture of American valerian, lobelia and capsicum. Keep on every few minutes, until temperature, pulse, breathing, become normal. Then select one or two bactericides and administer alternately, persistently. Select two of the following: naphthalin and ozonized essence of mustard; creolin and peroxide of hydrogen; salicylic acid in liquor ammonia acetatis and lactic acid: resorcin and salol.

FOR A MORE THOROUGH DESCRIPTION OF THE COMMA BACILLUS, THE PATHOGENIC MICROBE OF CHOLERA, ITS PREVENTION, AND A NEW TREATMENT WITH BACTERICIDES—WITH MAGNIFICENT MICROSCOPIC ILLUSTRATIONS, SEE PAGE 184, OF THE LARGE WORK ON BACTERIOLOGY.

In the infantile form. Cholera germ, evolved by solar heat—city life—acting on children; degraded living matter of infants under two years of age, aided by improper food, poverty of nerve force, and usually preceded by diarrhea, then purging and vomiting, the latter often constant, surface cold or fever, typhoid. Symptoms, weak pulse, colic, stools profuse, watery, then grass green or white, with fermented appearance like yeast, offensive, griping, drawing up the knees, face white, head thrown back, thumbs clinched, staring pupils, convulsions.

Prognosis, *favorable* if vomiting and purging cease, great diminution in the number of discharges, quiet, natural sleep, even temperature of the body, thirst abating: *unfavorable*, if restlessness, apathy, stupor, convulsions, incessant and obstinate vomiting, frequent motions, extremities cold and blue and shrunken.

Let all remedies be bactericides, there is where success comes; try some of the following, either resorcin or comp. syr. tolu; naphthalin and lactic acid. Keep the child in a cool, shaded place, abundant fresh air, or a run in the country. Cool, fresh air is very necessary to recovery, as it retards germ growth. Bathe the entire body thrice daily, water at 85° or down to 75° and cooler.

Diet is of great importance; fresh air, pure milk and lime water, barley water. If patient is debilitated and prostrated, feed on juice of raw beef, use no solid food.

In the cholera morbus form. Begins usually with an uneasy feeling or sensation in the stomach, vomiting and purging of bilious matter, colicky pains, cramps, cadaverous appearance, headache, pulse feeble, cold skin, cramps in the muscles of the abdomen and legs: if not arrested, there is increased prostration, chronic diarrhœa, gastritis, enteritis, bilious fever.

In the epidemic form. Due to the degraded bioplasm or living matter of the patient's own body; also propagated by contagion and infection. It is ushered in with disorder of the alimentary canal, stomach and bowels; nausea, vomiting, diarrhœa, disorder of the senses, breath cold; feeble pulse, copious sweats, violent vomiting and purging, pain in the abdomen, cramp, rice water stools, thirst, collapse, features shrunken, pulse imperceptible at the wrist, extremities cold and blue, rigid spasms.

The *Prognosis* is always grave.

Remedies.—The combination of lobelia, capsicum and valerian is almost infallible at the outset. It arrests the germ growth. Germicides. Use concentrated ozone and hydrocyanic acid, salol.

General Measures.—Put the patient in bed, surrounded by hot sand bags; perfect rest in a warm room, well ventilated.

Diet.—Juice of raw meat.

Involuntary contractions of the muscles, without loss of consciousness or complete loss of the power of the will, supposed to be due to the want of equilibrium between the gray and white matter of the cord, giving rise in some cases to incessant spasmodic movements, usually first seen on the face and hands, then extending to other parts of the body; sometimes stammering, difficulty of swallowing, inability to stand or sit.

The case must be thoroughly investigated as to causes, whether it be due to a fall, fright, metastasis of some rash, some microbe or ptomaine in the blood or parasite in the bowels. A large percentage of cases is due to reflex irritation, as masturbation, uterine displacement, pregnancy, constipation.

Sambul ozonized extract is our best remedy. It should be alternated with some active alterative—passiflora incarnata in

alternation with Fowler's solution is most effective when nerve nutrition is defective.

Nutritious diet, milk, sea bathing, bowels open daily; moderate exercise in pure air, avoid all excitement, mental or physical study. Massage morning and night.

Cramp or spasm of the bowels. There are numerous varieties of colic, some due to indigestion, flatulence, worms, simple; others are due to acrid states of the bile, with nausea, vomiting, yellow skin. Some are due to gout or rheumatism; some to obstruction, others to neuralgia.

Select from the following and like remedies, as comp. lobelia, concentrated ozone, chloroform, choral hydrate, opium, hyoscyamus, drosera, capsicum, euphorbia, in milk.

Administer lobelia, dose after dose, in warm soda water; produce emesis. Then drink water as hot as it can be taken. Place the patient on the left side, with the hips raised; give copious injections of warm water; retain as long as possible, hot fomentations to the abdomen. If these measures fail, administer chloroform internally and apply concentrated ozone over the abdomen.

Lead colic, due to the entrance of Colica Pictonum. lead into the body.

Its diagnosis is based upon the history of the case, a peculiar aspect of the skin, blue line on the gums, dyspepia, constipation, and depression of spirits. In the seizure severe pain ensues in the region of the navel, a feeling of indescribable wretchedness; vomiting; constant change of posture; struggling or crying with pain; stools, if passed, are dark-colored and in knotty lumps; tongue pale; tremulous if not relieved; inflammation, delirium, convulsions, paralysis, apoplexy, asphyxia, gangrene of bowels.

Lobelia and opium. Let the patient drink freely of warm water with these two remedies. They are valuable specifics: soon give relief. Iodide of potass in saxifraga unites with the lead and eliminates it from the body. Sulphate of alumina, in 5 grain doses, thrice daily, prevents the ingress of lead into the body. So does aromatic sulphuric acid. Quinine, with capsicum, are the best remedies for the paralysis, with rest and massage. Warm bath with 1 lb. of sulphuret of potassium unites with the metal and eliminates it from the tissues.

Deep sleep, one deeper than stupor, may be due to fracture of the skull, effusion of serum or blood, cerebral softening, with paralysis; to microbes or gases poisoning the brain; urea in the blood; the action of acro-narcotics.

The treatment must be according to the cause; administering remedies either by the stomach, rectum, skin, generally to neutralize a poison, an offending material—then to rouse up

vital force by friction, shampooing, flagellations, electricity, enemata of glycerine with peroxide of hydrogen; a drop of a one per cent. of nitro-glycerine on the tip of the tongue has a magical effect on the heart and brain.

Constipation. Diminished peristaltic action, due to poverty of the nerve force,—anything that will enfeeble the bowel, diminish its sensibility or drain off its fluids. A deficiency of bile, of nerve force or normal exercise.

Constipation, if obstinate, will give rise to serious results, such as inflammation, ulceration, gangrene of bowel, piles, fistula, prolapse of rectum, colic, liver and stomach disorders, and disturbance of brain, apoplexy, epilepsy, paralysis, hysteria, melancholia, hypochondriasis and insanity.

Invariably treat with tonics, the best of which are the kola nut paste extract, either alone or in a lozenge; the cascara sagrada lozenge is also excellent; a combination of tincture of nux vomica, one ounce, tincture of belladonna, three drachms; mix, dose from 5 to 10 drops thrice daily in water; ox gall and nux vomica also good. *Chionanthus virg.* is also an effective remedy.

Continenence and Incontinence of Urine. Continence, or an inability to pass urine, may be due to excessive acidity of the urine; over irritability of the muscular coat either from the acidity or over distension; weakness of the sphincter; reflex irritation, as a balanitis, adhesion between prepuce and glans penis, smegma around the corona; drinking excessively causing too great a flow; calculi; malformation; contraction of the bladder owing to hypertrophy of its walls; metastasis of the amylobacta of rheumatism, enlarged prostate.

Acidity to be overcome by alkalies, *acetate potassa*, uric acid solvent, fruits containing vegetable acids are changed in the system to alkalies; spasmodic contraction, belladonna, gelsemium; a lack of force in the sphincter, ergot, *salix nigra*, *passiflora incarnata*.

Try alkaline baths hot; a stream of water from a height often starts by acting on the sympathetic. All failing, draw urine off.

Incontinence, an inability to hold the urine is much more commonly met with than continence—extremely prevalent among children; neurasthenic ladies, and more rarely among adult males.

The causes are mainly the same as continence, inherent debility lying at the root of nearly all cases.

Try some of the following remedies: iron and belladonna; gelsemium and bromide of soda; ergot; nux; damiana, cantharides, *muira puama*, *rhus aromatica*, *salix nigra*; *pichi*, *passiflora incarnata*, stone crop.

Habit of frequent micturition during the day to be overcome by lessening fluids, flannel clothing, massage, and every possible means to improve general health.

The frequent micturition incidental to enlarged or irritable prostate is best relieved with oil of *thuja occidentalis*, or gelsemium, cocaine suppository.

Spasms of muscles, general or partial;
Convulsions. clonic or tonic; often begins in the eyes, hands or toes, involving the entire body, leaving the patient dull and stupid.

Due to irritation in the brain, or reflected to the medulla oblongata from any point at a distance as a worm in the bowels, a burn on the hand, a blister, a fright.

If seen during a fit, no time must be lost—strip the child, immerse it in warm mustard water for 10 or 15 minutes. Run a sponge either out of cold or ice-water down the spine—enemata of comp. lobelia infusion—cloths wrung out of warm water to head, dry mustard to extremities.

In the management of such cases the cause should be removed, if it can be ascertained. Comp. syrup of lobelia should be used to keep down spasm, orally and by the rectum. Fluid ext. musk root should be given, alternated with bromide of soda, followed by avena. *Passiflora incarnata* is also valuable.

Convulsions occurring during the progress of parturition. Convulsive movements of the limbs, muscles of the face; dilated pupils, red or livid countenance, fixed or convulsive eyes, foam at the mouth, involuntary escape of urine and feces.

Convulsions Puerperal. The ptomaines are present in the blood in all cases and it is imperative to remove all sources of irritation. Empty the bladder and rectum, place a piece of rubber between the teeth. Give infusion of lobelia freely by mouth and rectum as soon as possible. If the urine is albuminous and scanty, give diuretic teas, then administer bactericides, such as either peroxide of hydrogen, or resorcin, or salicylate soda in siegesbeckie, or bromide of ammonia with *passiflora* to neutralize the ptomaines.

Inflammation of the cornea is easily recognized
Corneitis. by the intense pain in cornea, headache, some fever, change in color of cornea. It may be caused by mechanical irritation, but generally due to mercury, gout, rheumatism, syphilis.

Remedies.—Alteratives and tonics. Treated according to the cause, whatever that may be, but in all cases irritating plaster to nape of neck, sulphate quinine, *saxifraga* and constructive remedies, for, if not energetically and skilfully managed, very apt to terminate in effusion of lymph and opacity. It may thus be damaged in three degrees, *nebula*, *albugo* and *leucoma*. *Saxifraga*, quinine and *passiflora* have a most decided restorative action on the eye.

Corns. The cause in all cases irritation. Soak the feet in warm water and soda for half an hour.

Bunions. Have the following paste made: Half pound potash; four ounces of water; half ounce of extract of belladonna; a little gum arabic and wheat flour, enough to form a paste, apply this to the corn for a few minutes, then remove it, loosen the edges of the corn with a sharp knife, re-apply the paste and in a few minutes the corn can be taken out by the roots. After it is out apply a lotion of sulphate of copper and chloroform. Another method is to rub the corn well down with emery paper every night and touch it with acetic acid.

Another excellent formula for corns is: Salicylic acid, 30 parts; extract cannabis indica, 5 parts; collodion, 240 parts. Mix. This mixture is applied by means of a camel's hair brush. In four days use a foot bath; rub off the collodion. If any portion of the corn remains, apply again, and again. The collodion fixes the acid to the part and protects it from friction; the cannabis indica, an anodyne, and the acid reduces and loosens the corn.

With reference to bunions remove the pressure of the boot or shoe by some mechanical contrivance. Then apply corn plaster or tincture iodine and collodion, or salicylate soda plaster. Salicylate soda and siegesbeckie make an excellent application.

Inflammation of the nostrils, irritation, sneezing, catarrh, chills, fever; discharge from nostrils, first watery, then mucous, muco purulent; pain in forehead; when the frontal sinuses are involved, pain swelling in cheek; when inflammation extends to antrum it is liable to extend to larynx and bronchia. In young infants the nostrils become blocked up and they are unable to nurse.

Thymol jelly is one of our best local restoratives, inserted up the nostrils, while a warm bath, rest in bed, warm room, a free administration of passiflora incarnata are of great efficacy.

Coryza. The microbial nature of croup has been long suspected, but it has only been recently that the fact was definitely settled.

Croup Membranous. The micrococci have been found in the blood, and also in the false membrane and sputa, agglutinated in small masses in the white corpuscles of the blood.

Cultures have been made, and rabbits inoculated with them, all of which died from true membranous croup. The inoculations were made chiefly about the neck, the membrane found on the trachea, and in the blood.

A careful examination of the blood shows that the micrococci first attack the white corpuscles, which become changed in appearance, the granules disappeared. The blood channels become so full of micrococci that they can no longer move;

they grow and breed so fast that they cause the rupture of the corpuscle and then escape and form zoogloea. Corpuscles filled with micrococci are also found in the false membrane; in the capillaries, their growth often dilates and completely obliterates them. The same result takes place even in the marrow of the bones.

The micrococci are pathogenic of the disease, conveyed through air and water, settle on a child's tender throat, and develop with fearful rapidity.

Seeing this in the case, too much cannot be said against the use of emetics, which is unfortunately a very common practice. The micrococci are found in the most superficial layer of the false membrane, and when this is removed by an emetic, an irritated, bleeding mucous membrane remains, which in some measure is protected by the false membrane from immediate contact with the microbes.

Whenever croup is suspected, the blood should be kept thoroughly sterilized by the daily, persistent administration of some bactericide, such as either the comp. syrup of tolu, or the sulphide of lime, or ozonized acetic syrup blood root. The calcium or tolu comp. on the stomach evolves antiseptic gases, which enter the body rendering it insusceptible to the growth of microbes, check their development, attenuate their virulence.

More recently C. P. peroxide of hydrogen, an 8-volume solution in glycerine, applied around the entire neck has met with remarkable success. It is worthy of a trial. It is said to sterilize the field upon which the micrococci subsist.

IF YOU ARE DESIROUS OF A MORE EXTENDED STUDY OF THE MICROBE OF CROUP WITH A NEW AND MORE DEFINITE TREATMENT, CONSULT PAGE 243 OF THE LARGE WORK ON BACTERIOLOGY.

This consists of laryngitis, with effusion
Croup False. of plastic lymph, which forms a false membrane; voice hoarse, reduced to a whisper; wheezing; patches or coat of false membrane seen about fauces; cough barking, followed by short, whistling inspiration; the exudation usually rapid.

Prognosis.—Unfavorable if there are signs of poisoning of the blood; face blue, hands and feet cold, fingers blue under the nails; drowsiness, stupor; pulse weak and intermittent; exhaustion.

Remedies.—Lobelia, comp. powder; acetic syrup of blood-root, iodine, belladonna, sulphur, phosphorus, ozone water.

General Measures.—Keep the temperature of room at 70° F.; moist, abundance of fresh air. Keep half a dozen steam atomizers going with iodine. If suffocation threatens, perform tracheotomy at once. The large percentage of recoveries warrant its adoption. Don't wait too long.

Diet.—Give most nourishing liquid food ; broths, beef tea, milk, eggs in milk, wine whey.

**Croup,
Spasmodic,
Inflammatory.**

False, catarrhal, inflammatory, spasmodic croup, with sore throat, croupy cough, paroxysms of coughing ; difficulty of breathing ; voice hoarse, feeble, scarcely above a whisper ; face flushed ; lividity ;

great distress.

A warm mustard bath, comp. syr. lobelia ; hot fomentations to chest and throat ; if the lobelia comp. does not relieve them try either aconite and belladonna ; or resorcin, or comp. syr. tolu, or euphorbia pil.

**Cough,
Nervous.**

Common to some nervous persons, irritation of inhaling dust, or excitement in delicate males and neurasthenic females, also children of feeble organization are often troubled with an irritative cough analogous to that present in bronchial irritation. Most likely due to some reflex cause.

Such remedies as the ozonized tar syrup, aconite, belladonna, matricaria, pulsatilla, musk-root, avena sativa, phosphates and prunia, as follows : prunia \mathfrak{z} iv ; aromatic sulphuric acid \mathfrak{z} i ; sulphate of quinine grs. xxxvi ; mix ; dose according to age of patient.

Passiflora incar.—a splendid remedy if of nervous origin ; if due to the ptomaines of microbes, the comp. syr. of tolu is most efficacious.

**Cyanosis,
Blue Disease,
Bacillus Indican.**

The microbe indician appears in the blood in newly-born infants in malformation of the heart ; depending on imperfect closure of the foramen ovale ; a communication between ventricles ; also, often due to imperfect expansion of lung air cells ; blueness almost amounting to blackness ; coldness, faintness, intermitting pulse.

It is also present in all diseases in which there is imperfect aeration of the blood, as pneumonia, tuberculosis, bronchitis, asphixia, carbonic acid and sewer gas poisoning. Preparations of ammonia, as the chloride alternated with creatine ; small doses of strophanthus ; passiflora, peroxide of hydrogen, adonin ; sparteine, digitalis, pure air, very nourishing food, sea bathing, avoidance of fatigue and mental excitement.

**Cystitis,
(Acute.)**

Inflammation of the bladder of the acute type is usually ushered in with rigors, pain above and behind the pubes, burning sensation extending to the neighboring parts ; dysury and vomiting.

Remedies.—Aconite ; passiflora incarnata ; belladonna ; gelsemium ; nitric acid and cinchona ; mineral acids ; uva ursi ;

cleavers; linseed meal poultice with turpentine and opium, arbutin.

Limit the quantity of fluids taken.

Chronic inflammation of the bladder, or as it
Cystitis, sometimes called catarrh of the bladder. Fre-
 (*Chronic.*) quent micturition, excessive mucous discharges
 in the urine; sometimes blood, crystals of phosphate, decomposition of the urine within the bladder.

Alteratives and tonics, buchu, uva ursi; cleavers, mineral acids, uric acid solvent, pichi, peroxide of hydrogen.

If case does not yield inject into the bladder, with a fountain syringe charged with tepid water acidulated, with nitric acid, solution of boroglyceride.

Diet.—Generous, to a fault; linseed or marsh-mallow tea, for drink.

On the membrana tympani, or drum of the
Deafness. ear, is reflexed, the auditory nerve, by or through which the brain receives the undulations of sound; thickening or perforation of the membrana tympani gives rise to deafness; the amoeba, the disease germs of catarrh, block up the eustachian tube and cause deafness; when the blood and brains are loaded with disease germs of bacteria, vibrios, as in typhus and typhoid fevers, deafness is present; so also in disease of brain.

Remedies.—If due to thickening, saxifraga; if to catarrh, nasal douche, with ozone or chlorine; if due to disease of brain, try coca, kephaline, avena sativa, cinchona, stimulants, etc.

The most hopeless cases of deafness are those dependent upon the ravages of the germs of diphtheria, typhoid fever, cerebro-spinal meningitis, and other grave brain lesions. The most successful treatment is such as we would resort to in cases of softening of the brain, persistent massage, tonics, and that wonderful drug "avena," which has such marvellous power in cerebral bankruptcy.

Other remedies worthy of a trial are kephaline, caffeine, anti-pyrin, thalline, peroxide of hydrogen, etc.

The mullein oil, dropped into the ear at bedtime, is the only local remedy from which salutary results have been obtained.

These failing a general alterative and tonic course should be tried.

The liver is a watchful janitor over
Degeneration of itself and the body at large; disease
the Liver. germs which might enter the portal circulation are arrested in their progress, during the secretion of bile, and emptied again into the *ductus communis*, so that their absorption into the general circulation is retarded, and an opportunity furnished them to escape, so that as a rule, disease germs of malaria, the hybrid germs of sewer gas, bacteria of mal-nutrition are not so productive of cirrhosis,

with either hypertrophy or atrophy, amyloid, or fatty degeneration, as solar heat, beer drinking, fatty and saccharine food, etc.

Symptoms.—Prostration, an undefined feeling of goneness, nausea, vomiting, pain in stomach, indigestion, copper taste in mouth, yellow skin, fetid breath, brown coated tongue, loss of appetite, scanty, high colored urine, anorexia, constipation, aching in matrix of nails.

Remedies.—Phosphate of soda, nitro-muriatic acid, leptandra, chionanthus, chloride of ammonia.

In a well-marked case of dengue, there is great prostration, pain and stiffness in the bones, and so very painful that he cannot move a limb—most excruciating pain in the forehead and orbits, which increases in severity till it becomes unbearable, some delirium and sleeplessness.

There is a pretty well defined period of incubation limited to 48 hours, followed by rigors and a fever, which continues about four days; about the fourth day of fever, temperature declines and rash appears, sometimes extensive at other times limited, of very variable character, polymorphous, sometimes an erythema, others papoid, while another resembles urticaria, with itching and burning—eruption lasts 2 to 3 days.

A scraping of the eruption yields the microbe, which very much resembles that of yellow fever. Its growth is not rapid; neither has it the faculty of exciting fatty degeneration of the liver, spleen and kidneys. It is pathogenic.

The only remedies so far successful in sterilizing and killing the germ have been exalgine and sulphate of quinine—with general treatment for fever.

FOR MORE EXTENDED DESCRIPTION OF THIS FEVER, ILLUSTRATIONS OF THE GERM, CONSULT PAGE 342 OF THE LARGE WORK ON BACTERIOLOGY.

In man and most mammals, there are two distinct sets of teeth; one set which appears shortly after birth, and which are termed the *milk* or *deciduous* teeth; and a second set, which, after a few years, replaces these, and which are termed *permanent* teeth.

In the human subject, the milk-teeth are twenty in number, each jaw containing (from before backwards) four incisors, two canines, and four molars; while the permanent teeth are thirty-two in number, each jaw containing four incisors, two canines, four bicuspid, and six molars.

The following is the usual order and period of appearance of the milk-teeth: The four central incisors usually appear through the gums about the 7th month after birth, those of the

lower jaw showing themselves first. The lateral incisors next appear between the 7th and 10th months; the anterior molars show themselves about the 13th month, and are soon followed by the canines, which usually appear between the 14th and 21st months. The posterior molars are the last and most uncertain in their time of protrusion, which may range from the 18th month to the end of the 3d year.

About the middle or end of the 7th year, the jawbones have become sufficiently elongated to permit the appearance of the first true molar; and about the same time, the central incisors are replaced by the corresponding permanent teeth. The advance of the permanent teeth towards the surface of the gum causes the absorption of the roots of the temporary teeth, and thus facilitates their shedding; the crown falling off, and leaving room for the permanent tooth behind it to come forward and supply its place.

In the replacement of the first by the second set of teeth, the following order is observed: The middle incisors are first shed and renewed (usually when the child is about eight years of age), and then the lateral incisors (perhaps a year later). The anterior molars of the first set are then replaced by the anterior premolars (this usually happens about the 11th year); and about a year afterwards the posterior deciduous molars are replaced by the second premolars. The permanent canines take the place of the deciduous ones in the 12th year; these being the last of the milk-teeth to be exchanged.

The dangers of teething among children are chiefly due to a want of phosphates in the blood, hence there is not material for their nutrition—hence they grow slowly, dentition is retarded—the reflex effect is disastrous, as the whole organism is undergoing a revolution, most productive of bacteria in the mouth.

Morbid Dentition.—Precocity, irritation of gums, due to want of phosphates in the food; tissue starved; cerebral disorder; give rise to convulsions, spasms of glottis, cough, indigestion, diarrhea, cutaneous eruption, fever, in which bacteria are abundant.

Falling of the Teeth.—They die from starvation, ulceration, scurvy.

Remedies.—Kepheline and *avena sativa*, coca, cotoin.

Diabetes. Neurasthenia, with vaso-motor disturbance, gives rise to paroxysmal glycosuria, with or without a gouty diathesis, but invariably associated with a neurotic state in which nerve-tire, overwork, or worry, play an important part.

Glycosuria, paroxysmal or permanent, with the sugar fungus in the blood, is essentially a condition of brain wreckage or bankruptcy. When the co-ordinating chemical centre in the brain is damaged, an irritation is transmitted to the liver, grape

sugar is elaborated in such abundance, that the ozone-forming faculty of the lungs is incapable of burning it up hence the presence of this agent in the blood and tissues of the body in such abundance, as to give rise to a living, breeding fungus in the blood—a fungus which is pathogenic of the disease.

Its diagnosis rests chiefly on the feeling of goneness; the excessive appetite for either food or drink or both; chloroform odor of breath; constipation; often cataract; usually specific gravity of urine, loaded with grape sugar runs from 1020 up to 1065; tuberculosis.

The fungus is most easily isolated from the urine, capable of culture in any saccharine or starchy liquid at a temperature between 80° and 90°.

Injected into animals, it gives rise to the disease, with all its symptoms of thirst, voracious appetite, prostration, chloroform breath, cataract.

Restrict or forbid all saccharine or amylaceous articles of food, otherwise most liberal diet.

Jambul, in 5 to 10 grain pearls after meals, prevents saccharine fungus from forming.

Bactericides are the remedies to destroy it. Passiflora has been of utility. Glycerite of ozone has afforded excellent results. Salol has been found of utility. Resorcin, ozone water, siegesbeckie, thymol, the uranium salts are often effectual. Peroxide of hydrogen very efficacious.

FOR A VERY FULL ACCOUNT OF THIS FUNGUS, THOROUGHLY ILLUSTRATED, NEW METHODS OF TREATMENT, SEE PAGE 256 OF THE LARGE WORK ON BACTERIOLOGY.

Diarrhœa. Frequent movements of the bowels either painful or otherwise are due to the excreta or ptomaine of the various microbes giving rise to diarrhea, serous, mucous, feculent, nervous.

The best treatment consists in rest, dry heat to abdomen, an avoidance of all fluids which are a pabulum to these germs, and then select according to experience one or other of the following remedies: Salicylic acid, lactic acid, salol, naphthalin, kaki, baptisia, cota, stone crop; if nervous, passiflora incarnata. If case does not yield promptly to these remedies apply concentrated ozone over the entire abdomen.

Of all microbes the streptococcus of diphtheria has been subjected to the most complete systematic analysis in its morphological, cultural and physical character. All testify to the fact that it is a microbial disease incidental to the most shattered state of vital force, being analogous to the rot in animals and plants. Adverse states

Diphtheria.

The

Streptococcus.

prejudicial to human life have a tendency to give rise to this special degradation.

Its diagnosis is not difficult—indescribable languor, lassitude, debility, followed by rigors and a fever followed by vesicles upon some mucous membrane, generally the fauces, uvula, tonsils, tongue, gums or other parts of the mouth; vesicles coalesce, become like washed leather patches, and if not interfered with become gangrenous; great fetor of breath.

The microscopical examination of the breath, saliva, blood, urine reveals the micrococcus, although the serum of the vesicle, or a piece of the membrane affords the best specimen. The microbe appears in the form of cells which lie singly, or in pairs, or in rosaries, or in spherical or cylindrical masses.

In the blood it is a rapid ptomaine excretor of a most toxical and tetanizing character—an alkaloid which paralyzes the heart, muscles of the neck, face and other parts, gives rise to thrombosis, infraction of the kidneys; clot in brain and heart.

The germ is pathogenic; easy of culture in blood serum, veal or lamb broth, but cultures of successive generations have not been attained.

General principles of treatment must be observed, bathing patient thrice daily, bowels opened with enemata; atmosphere of room constantly filled with bactericides; C. P., peroxide of hydrogen diluted with glycerine to throat; beef tea and milk punch for diet; a mixture of aconite, belladonna and digitalis for fever; then either sterilize, or completely annihilate the streptococcus with one or other of the following remedies: Either glycerite of sulphur ozonized; comp. syrup tolu; resorcin; carbolic acid and tincture of iodine; sulphur water.

Locally brush over patches every few hours with either distillation of jequirity, or lactic acid; peroxide of hydrogen; solution of salicylate soda; salicylic acid and siegesbeckie. Inhalations of iodine, naphthalin, creoline; spray the mouth and throat frequently with the peroxide of hydrogen.

FOR A MINUTE AND DETAILED DESCRIPTION OF THE STREPTOCOCCUS OF DIPHTHERIA—ITS EVOLUTION, ITS PRESENCE AMONG ANIMALS, ITS CARRIAGE BY DOMESTIC ANIMALS, THE IDENTITY OF ANIMAL AND HUMAN DIPHTHERIA, MAGNIFICENTLY ILLUSTRATED WITH ORIGINAL DRAWINGS. NEW TREATMENT WITH BACTERICIDES, SEE PAGE 167 OF THE LARGE WORK ON BACTERIOLOGY.

Displacements of the Uterus. **Anteversio of the Uterus.**—The *fundus* falling forward. Rare. Those of pressure of urethra or rectum; tumor in anterior wall of vagina; with retention of urine, and constipation. Vesical calculus; retroversion; pelvic tumors; ovarian tumors.

Retroversion.—The *fundus* falling backward, the *cervix* impinging against the urethra; in less degree, the fundus being only tilted back, termed **RETROFLEXION**. Derangement of menstruation; aching pains in loins and back; tumor in posterior wall of vagina. Dyspepsia; hysteria; retention of urine; constipation.

Diagnosis.—Tumor in pelvis; ovarian disease; anteversion; ascites.

Prolapsus Uteri.—*Falling of the Womb.*—1. *Procidentia*, imperfect prolapse; 2. *Complete prolapse*. May occur in the unimpregnated and unenlarged organ; or from pregnancy, tumors or enlargement; during labor; after delivery; or from pressure of neighboring diseased parts, as in ascites, ovarian diseases, etc. Mechanical, in the parts; sympathetic, in distant organs; weight and dragging; disordered menstruation. Retention of urine; strangury; constipation; leucorrhœa; menorrhagia; inversion; prolapse of the vagina; tumors. All forms of uterine displacements to be adjusted and retained in position by small linen pyriform sacks, which may be medicated with astringents or anodynes, or mechanical support. The insertion of the white pond lily pastille, every evening on going to bed, has been most effectual in overcoming this.

Inversion of the Uterus.—The organ descending, and turned inside out. 1. *Partial*; 2. *Complete*. May occur immediately on delivery; a few days after parturition; or gradually, from weight of a uterine tumor; sudden and alarming exhaustion; paleness; pulse rapid, small, and fluttering; vomiting; often *violent uterine contraction*, as if to expel a second child; globular, elastic tumor in the vagina, or protruding from the vulva; in the gradual form, symptoms less marked. SEQ: Exhaustion; fatal hæmorrhage; cystitis; gangrene of the inverted portion; sloughing. Polypus; uterine and vaginal prolapses. Fatal, unless speedily reduced. This must be done by gradually returning the superior part, by grasping it with the hand, and making the rest follow.

Often a symptom of neurasthenia. Excessive
Diuresis. urinary secretions; urine very limpid, pale, with low specific gravity, less than distilled water; often present in neurasthenia, nervous disease, masturbation, debility, loss of flesh. Perform massage, give coca and general tonics, as mineral acids and cinchona.

Effusion from serous membranes.

Dropsy. **Hydrocephalus.**—From membranes of brain.
Hydrothorax.—Water in the cavity of chest, from pleurisy or cardiac disease.

Ascites.—From effusion of peritonitis and cirrhotic liver.

Anasarca.—Effusion into cellular tissue; the result of obstruction in the kidneys; Bright's disease.

Remedies.—Infusion of digitalis, hair cap moss, iodide potass, bicarbonate potass, and nitrate potass, elaterin, apocynum.

General Measures.—To be successful it must be understood that dropsy is not a disease, but an effect, so if it were possible to remove the cause, the effect can be removed by skin, kidney and bowels; an infusion of digitalis unlocks the flood gates and cathartics aid materially; while pressing this treatment, take daily baths, wear flannel clothing, and best blood-making food is essential. Very valuable remedies for the removal of dropsical effusions are: Pulv. podophyllum, grs. xxx; nitrate potass pulv., grs. 60; bi-tartrate potass, ℥ii. Mix. Make ten powders, one frequently to act freely on the secretions.

Or a most excellent formula is the following: Fl. ext. hair cap. moss, ℥iii; fl. ext. apocynum; fl. ext. juniper berries, aa ℥ss. Mix. From a half to one teaspoonful three or four times daily, alternated with a sufficient quantity of sulphur and cream of tartar, dissolved in Holland gin, to keep the bowels freely open.

**Dropsy
of the
Cellular Tissue,**
(*Anasarca*.)

Due to obstructure in the kidneys (Bright's disease). Intestinal degeneration, debility, cardiac disease.

Treat the same as other forms with strophanthus, bitartrate potass, and hydragogue cathartics. Drop doses of one per cent. solution of nitro-glycerine, most effectual in bracing up a collapsed kidney. Administer in alternation with caffein, tonics, alterative.

If the above fail, try comp. powder of jalap and senna, with the uric acid solvent or lithia water.

**Dropsy
of the
Brain,**
(*Hydrocephalus*.)

Dropsy of the brain, an effusion of serum into the cavity of the arachnoid, which follows inflammation.

The *symptoms* are enlargement of the head in the frontal, parietal and occipital regions; then an uncertain gait; paroxysms of violent pain in the head, with screaming and impaired senses. It must be carefully distinguished from large head, the result of diseased bone.

Prognosis.—As a general rule, pretty fatal; *most unfavorable* if there be stupor, eyes dim or glazed or turned upwards, convulsions. *Very favorable* if urine flows free, perspiration, intelligent aspect, breathing regular, skin cool.

General Measures.—The first essentials to a cure are: Bowels to be kept a little too free; entire body to be sponged off

twice daily, followed by gentle friction of the skin; most nourishing food, as juice of raw meat, sea air; sleep to be very much prolonged by the use of the hop pillow, on which concentrated ozone has been sprinkled. Tincture of iodine is our most important remedy. Take a few drops in sweet milk. Next glycerite of ozone. Fluid extract sumbul is our sheet anchor if irritable; also bromide potassa and belladonna. Passiflora operates well. To get rid of dropsy, use an infusion of digitalis, drop doses of strophanthus, hair cap moss, cream of tartar, iodide potassa, etc., etc. Scalp shaved, aristol ointment rubbed in morning and night, covered with oiled silk. Dry mustard placed in the socks all through the case, to the feet and legs.

**Dropsy
of the
Chest,**
(*Hydrothorax*.)

Dropsy of chest; result of pleurisy, or a disease of heart, or poverty of blood; the water in the chest is diagnosed by patient sitting, then lying down; dullness in the former, clear in the latter; lividity of the face; œdema of face and feet; dullness of chest.

Remedies.—Infusion of digitalis, diaphoretics and diuretics, hydragogue cathartics, nitrate potass, bitartrate potass, mandrake, elaterin, hair cap moss. Apocynum is our best remedy.

Dropsy of Scrotum.
(*Hydrocele*.)

Dropsy of scrotum, or, properly speaking, an effusion from the tunica vaginalis, pear-shaped, swelling, smooth, fluctuating, without pain;

the scrotum being transparent.

Treatment for dropsy may be tried with chloride of ammonia lotion. Tapping certain, provided secreting faculty of sac is destroyed, with seton or iodine, or otherwise.

Dysentery.
The
Microbe.

Frequent evacuations from the bowels, accompanied with pain and tenesmus, with languor, lassitude, debility, brown coated tongue, fever, and a microscopical examination of the evacuations reveals the presence of this microbe, constitute what is known as dysentery. The microbe, as seen in the field of the microscope, appears slightly elongated and oval, or short and cylindrical, with rounded ends. They divide by fission; like the micrococci, the individual germ elongating, and being slightly constricted in the middle, capable of spontaneous locomotion, having a flagellum at one or both ends, with which they perform active spinning or darting movements. They form zooglœa, in which the interstitial gelatinous substance which constitutes their body is more copious.

The microbe is pathogenic of the disease, bears cultivation well in any kind of meat broth; the cultures when injected into

animals, give rise to all the virulence of the original disease. This micro-organism is indigenous to the rectum and colon; breeds and multiplies there; excretes ptomaines very freely which give rise to the pain, the tenesmus, fever, coated tongue and general depression.

The treatment involves rest in the recumbent posture; liquid food.

The micro-organism is either sterilized or completely annihilated in the presence of ozonized stone crop; creolin, peroxide of hydrogen; naphthalin; salol, resorcin; ozonized essence of mustard; salicylic, lactic and mineral acids; kaki.

Flushing the colon with warm infusion of flaxseed in which peroxide of hydrogen is freely incorporated, will sweep out the entire batch of germs.

FOR A MORE ELABORATE ACCOUNT OF THE MICROBE OF DYSENTERY—ITS NEW TREATMENT WITH MICROBICIDES—AN ILLUSTRATION OF THE GERM, SEE PAGE 260 OF THE LARGE WORK ON BACTERIOLOGY.

Dysmenorrhœa. Painful or difficult menstruation—three forms.

1. Neuralgic, due to spinal anæmia.
2. Congestive, due to plethora, inflammatory.
3. Mechanical, cartilaginous, thickening of neck.

In either form the menses may be scanty, profuse, or in ordinary quantity, but there is excessive pain and general disorder.

Remedies.—For the neuralgic form, belladonna, passiflora incarnata, cocaine suppositories, coca and ateri cordial internally. For the congestive form, iodide potass, iodide of lime. For the mechanical form, ozonized suppositories. If they fail, neck of uterus—semi-cartilaginous—must be slit up; saxifraga is invaluable.

General Measures.—Improve the general health by every possible means at command with tonics and alteratives. Pain, in all cases, must be relieved by comp. conium pill, or cocaine suppositories, or urethan, hyoscyamus.

Dyspepsia. Indigestion, best rectified by a careful selection of light, nutritious diet, thorough, slow mastication of food, bitter tonics, mineral acids, artificial digestion with either papoid or pepsin at meals.

The liquor cerii is the best remedy when the indigestion is accompanied with pain—but if there be gastialgia, eructations, then give passiflora incarnata in alternation with it, the latter remedy being a sedative to the pneumogastric and vagus.

In all ear affections—otalgia; otorrhea;

Ear Maladies. polypus; deafness; mullein oil dropped into the ear is a remedy of marvellous value, effecting magnificent results.

Effusion of lymph into the skin and cellular tissue, is best got rid of by binding on the part boroglyceride paste during the day, and glucozone at night, or resorcin or thymol jelly.

The former eversion of the eye-lids, so that they do not close; the latter a turning in of the

Ectropion: lids—both affections are usually the result of effusion of lymph which produces this change in the lid.

The application of the boroglyceride paste to the lids will speedily cause its absorption and rectify the deformity. Cases not amenable to this remedy must be relieved by operation.

A thick, clotty condition of the blood, may be the result of malarial or other poisons, non-aeration of blood, defective action of the liver, skin, congestion of lungs, and disease of supra-renal capsules.

Embolism;
Thrombosis;
Bacillus
indican.

Incidental to this state, cause or effect, the bacillus indicans appears in the blood.

Its recognition is usually easy, if there be blueness of the ears, nose, lips, nails, peculiar sensations about heart, fainting fits, etc., etc.

In a drop of the patient's blood, the bacillus can be seen in the form of very short rods, with rounded ends.

They are round, ovoid, or spindle shaped, and have characteristic granular margins, having a strong resemblance to the microbes of pneumonia and rhinoscleroma, both of which are capable of giving rise to the formation of indigo blue, and to indigo fermentation.

This microbe plays an important part, and determines the formation of indigo in various diseases.

Indigo is a fermentative product due to the action of this microbe.

The indigo-bacillus is pathogenic of various diseases, which are chiefly due to a non-aeration of the blood, bears cultivation well in blood serum. Cultures injected into any animal give rise to embolism, hepatization of lungs, cardiac apoplexy, visceral congestion, fibrinous exudation.

This microbe is completely sterilized in the presence of liquor ammonia acetatis, in alternation with tincture of belladonna; peroxide of hydrogen in alternation with sulph. quinine; comp. oxygen, ozone water and other bactericides.

A MORE EXTENDED DESCRIPTION OF THIS AFFECTION—AN ILLUSTRATION OF IT WILL BE SEEN AT PAGE 395, OF THE LARGE WORK ON "BACTERIOLOGY."

Air in the tissue of the lungs ; *vesicular*,
Emphysema. dilatation of the air cell ; *lobular*, a sac or pouch at some abrupt angle.

These air sacs cause great difficulty of breathing, wheezing in irregular paroxysms ; face and lips become blue, then livid ; no fever ; slow pulse, low heat, weak, feeble ; chest expands ; can readily be mapped out by percussion.

The only remedy of any avail is English extract hyoscyamus solid, leaves of lobelia powdered, sulphate quinine, of each thirty grains ; make three-grain pills ; one every three hours for some months, in alternation with drop doses $\frac{1}{100}$ solution of nitro-glycerine. Coca is excellent—indeed, our only curative drug.

Recently quebracho, a drug of some repute in embarrassed respiration, has been tried with little success—has not even the property of stimulating the respiratory centre like euphorbia. The latter of surpassing excellence in all cases of emphysema.

In all forms of inflammation of the
Endocarditis. internal lining membrane of the heart,
 (*Micrococcus*.) whether the original cause be gout, rheumatism, or some grave depressing passion, there is usually a disease germ present, which possesses great powers of reproduction.

The presence of this germ in all cases of endocarditis is recognized by the following landmarks—irregular action of heart, great difficulty of breathing, palpitation, irregular pulse, pain and uneasiness about the heart.

After death the streptococci are found upon the thickened valves of the heart—they are seen in the form of small chains, linked irregularly together ; later on, they assume the form of zoogloea, and are found congregated together and form plugs in the muscular substance of the heart. In the detritus of the ulceration which follows they are found in chains.

When the sympathetic system is greatly shattered, this germ assumes great microbial growth, engorging the entire muscular structure, causing abscess, and other grave changes.

The micrococcus is most difficult to sterilize or annihilate ; sparteine, passiflora, adonidin, strophanthus cause the germ to wither and die.

FOR A MORE DETAILED DESCRIPTION OF THE MICROCOCCUS PRESENT IN ENDOCARDITIS, SEE PAGE 573 OF THE LARGE WORK ON BACTERIOLOGY.

Inflammation of the small intestines, due to
Enteritis. some mechanical irritation of the bowels, metastasis of gout, rheumatism, germs, with griping pain at umbilicus, with tenderness on pressure, diarrhoea, con-

stipation, rigors, fever, if acute; and if chronic, diarrhoea is obstinate.

Rest in bed, stimulants over the entire abdomen, either concentrated ozone and chloroform; or ozonized turpentine. If there be fever, aconite and salol; or passiflora and naphthalin; select some of the following remedies, kaki, stone crop; collinsonia; columbo, hydrastis—passiflora sufficient to relieve pain.

The diet in all cases should be very light, nutritious, chicken, or mutton broth, beef tea, milk and lime water, beef.

Epidemic Influenza.

(*La Grippe*.)

Deficient ozone areas, meteorological, atmospheric disturbances, have given rise to the evolution of a microbe within those areas, which seizes upon and lodges in the weakened respiratory mucous membrane, enters the blood, produces great constitutional disturbance and morbid changes in that fluid.

As far as our microscopical examinations have gone, together with the various culture tests, the germ is found to be pathogenic of the disease, it bears culture well in any gelatinous fluid, which, when fed to rabbits, produces the original disease in all its virulence and malignity.

The microbe belongs to the pneumococcus family, but is a compound conglomerated germ consisting essentially of the croupous bacterium pneumococcus, numerous forms of sporadic germs, cocci, diplococci, short rods, mostly encapsulated. Its presence in this city has increased the usual weekly mortality by over two hundred additional deaths.

The electrical disturbances between the oxygen and nitrogen of the atmosphere give rise to pneumo-paresis, which is the great source of danger.

The treatment in all cases should be the same as for pneumonia—energetic, persistent.

FOR A MORE EXTENDED DESCRIPTION OF THE BACILLUS OF LA GRIPPE, EPIDEMIC INFLUENZA, WITH AN ILLUSTRATION OF ITS PTOMAIN, A TETANIZING ALKALOID, SEE PAGE 1252 OF THE LARGE WORK ON BACTERIOLOGY.

Epilepsy. Paroxysmal convulsions, with loss of consciousness, loss of power of voluntary motion, sensibility, followed by coma.

It is recognized by the aura or warning, by the dilated pupils, general neurasthenia, then the seizure, loss of consciousness, loss of motion, the fall; the tonic spasm, alternating with relaxation; face livid, contortions, foaming at the mouth, biting at the tongue, difficult respiration. The fit may last from a few minutes to several hours.

As a rule, in epilepsy, there is a patch in the brain weakened,

undergoing molecular change, and this itself may give rise to the fits that are central. But an irritation at a distance, peripheral, as worms, burns, masturbation, uterine derangement; or there may be some disease germs in the blood, circulating through the weakened patch in the brain, excreting their ptomaines, irritating it, thus giving rise to the explosion of nerve force.

During the attack, loosen the clothing; watch and guard the patient from doing bodily injury. Hypodermic injections at back of neck over cervical sympathetic will usually break up an attack; if not, use enema of starch and turpentine.

In the treatment remove the cause of disease, if possible. General alterative and tonic course; ozonized extract sambul, in sufficient doses to ward off the fits; it is well to alternate the sambul, with large doses of *passiflora incarnata*; *kephaline* and *avena sativa*, to repair the patch in the brain, are most effectual. Twice weekly apply two small blisters to the nape of the neck, cervical sympathetic, not to be kept on longer than six hours.

Ceanothæ crocata, *simulo*, and other remedies have been tried, but have no real merit either in warding off the fits or in any way mitigating the nerve storm. Sambul or musk root is the drug of real value.

Hemorrhage from the nostrils, often preceded
Epistaxis. by headache, fullness in the head, disordered vision.

It may be due to violence, congestion, or vicarious menstruation, scurvy, purpura; often a precursor of fever.

General Measures.—Raise the arms above the head; apply cold to nape of neck and root of nose; if these do not arrest, inject a spray of solution of perchloride of iron up the nostrils, or plug the nostrils with a solution of same on cotton wool.

Apply turpentine over region of the liver.

Erysipelas. This must ever be regarded as an infectious and contagious disease, due
 (*The Streptococcus.*) to a streptococcus in the blood, the outcome of perverted nutrition, deleterious food and insanitary conditions. Under such and like adverse conditions, the bioplasm of normal nutrition is changed, altered, degraded into a disease germ—which in the blood acquires prodigious powers of growth and multiplication.

Its Diagnosis is easy. After an undefined period of languor, lassitude, debility, with fetid breath, brown-coated tongue, constipated bowels, the microbe appears on some weakened patch of the skin and cellular tissue. When it puts in an appearance symptoms of inflammation supervene which, owing to its germinal character, either spreads widely, or flies from one weak patch to one still weaker—the intensity of heat, redness, swelling, burning, tingling, correspond to the activity of microbial evolution and spore formation.

The microbe is most minute, consisting of cocci in chains, and by the aid of the microscope can be detected in the scrapings of the tongue, breath, blood, feces, kidneys, and by millions in the erysipelatous blush especially near the sharp edge of the inflamed patch; the development of the germ takes place in the lymphatics, and it is along them that they pass into the blood.

The germ is pathogenic of the disease; artificial cultivation succeeds best in almost any nutrient broth; inoculation of the cultures into animals give rise to the disease.

To sterilize and annihilate the streptococcus, general principles of attention to stomach, bowels, skin.

Locally to the germ-laden skin, apply a saturated solution of boroglyceride and keep constantly wet. Covered over with oiled silk. This entirely supersedes tincture of iodine, seigesbeckie, veratrum, lobelia, lime water and iodine over the microbic zone.

Internally administer either brewer's yeast, or resorcin, or sulphur or ozone water, or lycopodium, or comp. oxygen, or peroxide of hydrogen, any good bactericide.

FOR A DETAILED DESCRIPTION OF THE STREPTOCOCCUS OF ERYSIPELAS, AN ILLUSTRATION OF THE GERM, ITS PTOMAIN EXCRETA, NEWER REMEDIES FOR ITS CURE AND SANITARY MEASURES FOR ITS PREVENTION, SEE PAGE 308 OF THE LARGE WORK ON BACTERIOLOGY.

As there has taken place a complete revolution in the science and art of medicine, chiefly owing to the fact, that in all shocks, all depressions, all deviations from a state of normal vitality, microbes appear either as the degraded bioplasm of our own bodies, or of others, or engendered by certain tellural, or meteorological conditions, disease germs ever present in all states of vital depression, when they loosen up, become active, germinate, spore formation, segmentation, in all those processes, they excrete ptomaines, toxical alkaloids, which destroy life. Vital force repels those destructive agents, resists them by a salutary effort of nature, a fever.

These usually begin with a precursory stage—lasting some days of nerve depression, pain in the head, back, and limbs, a coated tongue, loss of appetite; arrested secretions, with languor, subsequently a chill, or rigor, then fever, lassitude, debility, headache, quick, hard, full pulse, increased respiration, nausea, vomiting, giddiness on attempting to sit up or get up, urine scanty, bowels constipated.

The duration of the fever will depend on the poisonous character of the ptomaine and the skill of the physician in annihilating the germ and neutralizing its ptomaines.

The entire nervous system is irritable from the presence of these bodies and must be soothed by the administration of either tinctures of aconite, veratrum viride, belladonna or passiflora incar., alternated with bactericides to kill the germ and neutralize the ptomaines. These remedies must be aided with rest, bathing, liquid diet, destruction of disease germs in the apartment by disinfectants, after which, by degrees, the heat, pulse, and respirations decline, the skin becomes moist, the tongue cleans, the appetite and strength improve, and the patient becomes convalescent.

The various types of fever are simply the outcome of various disease germs and their ptomaines.

Fistula in Ano. A fistulous tube, lined by a false membrane, which is loaded with microbes communicating with the bowel and parts external to the anus.

Three varieties, *blind internal* within, opening in the rectum, but none external to the anus; *blind external* no opening outside on the nates, but one inside the bowel; *complete*, when the fistula runs clear into the bowel. In the three forms bacteria are abundant.

In all cases, under all conditions, heal it up. Select some of the following methods of treatment: Ligation and gradual compression are used. Injection, favorite method as it meets the pathology as follows: First wash out the fistula with a five per cent. solution of peroxide of hydrogen. Then inject a ninety-five per cent. solution of carbolic acid and an equal quantity of a ten per cent. solution of cocaine. Draw twenty to twenty-five minims in the syringe. Push the needle to the depth of the fistula and then inject slowly as you withdraw the needle. Within two hours inject a solution of equal parts of oil of eucalyptus and glycerine, and the operation is finished. Keep patient quiet for forty-eight hours.

Another very excellent method: Take of each, carbolic acid and glycerine, three drachms; sperm oil, half a drachm. Mix. Heat to 300° F, and evaporate to four drachms. Use the same as thus directed. Open bowels with large dose of castor oil. After evacuation, wash out rectum with saturated solution of boroglyceride. Then place patient upon his arms and knees on a chair seat, clean out sinus, put one finger in the rectum over the opening in the bowel (if there is one), then fill the sinus with the solution as the instrument is withdrawn; press down the piston of syringes when removed that it will be full, put finger on external opening for a few minutes. Lock up bowels for over a week by administering one grain of opium every four hours. If there is the least doubt of this procedure, inject sinus the following morning in the same manner without finger being in the rectum.

Cracks, fissures, abrasions, in and around the verge of the sphincter muscles of the rectum are usually caused by constipation, spasmodic action of the muscle, its laceration by hardened fæces or foreign bodies.

Its diagnosis is easy, a crack or fissure with most excruciating pain in defecation, pus, blood, etc.

Difficult to heal. Regulate the bowels with kola nut paste or juglandine, completely paralyze the sphincter muscle by keeping constantly applied to it during the day, belladonna ointment on lint, keep it in close apposition with a T bandage or belladonna suppository. Wash every night, the external parts with castile soap and water. Inject before retiring to bed twenty drops of the following mixture in three tablespoonfuls of slippery elm water: Fluid extract hamamelis, half an ounce; Monsel's solution of iron, one drachm; carbolic acid, two grains; hyoscyamus, two drachms. Mix. Repeat every night till cured. Or some of the following ointments may be utilized, thymol jelly or ozone ointment, one ounce; salicylate soda, two drachms. Mix. Or, carbolic acid, three grains; sulphur, thirty grains; ozone ointment, one ounce. Mix. Or, carbolic acid, thirty-five grains; simple cerate, one ounce; vaseline, half an ounce; thymol, grs. v. Mix. Or, carbolic acid, fifteen grains; pulverized opium and tannic acid, of each, twenty grains; muriate cocaine, two grains; ozone ointment, one ounce. Mix. Or, two grains of each carbolic acid, balsam peru and fer. extract matica, lac sulphur. Mix in one ounce of ozone ointment. Any one of those, according to the state of ulcer, can be used advantageously by patient with ointment injector. All are excellent formulæ, and either of them will afford most gratifying results.

Gastric Fever Bacteria.

A few years ago this term was applied to all disease germs; at the present time the name is restricted to that germinal mass present on the tongue, in mal-assimilation, in disordered states of the alimentary canal, in wounds or breaches of continuity. It is identical with the *bacillus megatherium*, which is invariably found on decaying vegetables.

The microbe consists of large rods like small sausages, four or five times longer than wide, usually somewhat curved. In the process of sprouting, transverse division occurs, each segment attaining the same length as the original rod. When first seen, with a power of 1250 diameters, they appear non-articulated, but when a drop of alcohol is placed on them, the segments are clearly seen. The rods are motile and form irregular chains of a disjointed appearance.

The bacteria are the most common of all the disease germs, being nothing more than the degraded elements of nutrition in man, and plants, changed, altered under some adverse conditions.

It is found in all deranged or perverted states, as well as in wounds, ulcers and the like.

Like all other disease germs it has, in a favorable media, most marvellous powers of reproduction.

Bacteria are pathogenic of perverted nutrition they bear culture well on slightly acid nutrient agar, and nutrient gelatine. Cultures injected into animals produce profound mal-nutrition; tongue coats heavily, spore formation takes place in the salivary glands, mouth fauces, germ-evolution takes place in the usual manner. If not sterilized or annihilated, it becomes an immense and prolific breeder, its ptomaine giving rise to colic, abdominal flatus.

Bacteria are either sterilized or completely annihilated by the administration or application of either of the following remedies—peroxide of hydrogen, sulphur water ozonized, comp. tincture matricaria: acetic acid, which creates an alkaline secretion; boroglyceride.

The best illustration that could be given of the presence of bacteria, is that of gastric fever which is so common among children; usually caused by eating or drinking articles which are indigestible, that offend, irritate or depress the stomach.

It is ushered in with lassitude, chilliness, fever, violent headache, loss of appetite, great thirst, the very thick white coating on the tongue, nausea, vomiting, pain over region of stomach and abdomen, with constipation.

Later on the tongue becomes dry and brown, fever high, pale face, cold extremities, vertigo, nausea or vomiting, splitting headache, fetid breath, vomiting, or else constant nausea, with disposition to vomit; debility increases.

Treatment.—Emetic of wine of lobelia, followed by the neutralizing cordial to open the bowels; aconite for fever; steam or stew wormwood in hops in vinegar, add dioxide of hydrogen and apply hot over the stomach and abdomen; change frequently.

Antiseptics should be commenced early and administered all through the case; small doses of nitro-muriatic acid or ozone water are very beneficial.

The diet for some time must be very carefully guarded.

FOR A FULL AND ELABORATE DESCRIPTION (ILLUSTRATED) OF THE BACTERIA, THEIR PRESENCE IN THE ORGANS OF DIGESTION—THEIR EVOLUTION, SEE PAGE 190, OF THE LARGE WORK ON "BACTERIOLOGY."

Gastric Catarrh.

(*Sarcinæ Ventriculi*.)

this type.

Mucous dyspepsia, catarrh of the mucous coat of the stomach, is the most common of all forms of indigestion, 75 out of every 100 being of

It may be defined to be a weak, relaxed condition of the lining membrane of the stomach, with an excessive secretion of mucus, in which the fungus "*Sarcinæ*" is evolved, and breeds according to the amount of mucus secreted.

Its etiology is due to the habit of drinking excessively of fluids, especially malt liquors, to improper mastication of food, hurried eating, disease of the liver.

Its diagnosis rests chiefly upon the fur on the tongue, and *sarcinæ* in the mouth; pyrosis, heart burn, flatulence, sour eructations, distension of the stomach and abdomen, constipation, with every 2 or 3 or more weeks, sudden attacks of diarrhea, the maturing of the fungus, and its passage by the stools. A reformation, re growth of the plant takes place and goes through the same process.

The reflex symptoms to the medulla oblongata, give rise to headache, vertigo, languor and debility. The train of nervous symptoms which accompany gastric catarrh, are due to the ptomaines excreted by the fungus.

For a good microscopical examination it is best to administer an emetic, and procure the fungus free from admixture with food—place a piece of it in the field of the microscope, when cocci, cubes or packets, with rounded-off corners, are seen in groups of four, or multiples of four, united in families of eight, sixteen, thirty-two, sixty-four. Contents of the fungus, greenish or yellowish red.

The germ or fungus bears cultivation well on albumen or liquid gelatine.

Pathogenic of catarrh of the stomach, communicated to water through the sewers, thence to poultry and animals.

Fungus *starved* out by either drinking freely of an infusion of bayberry or stone crop, or collinsonia, kaki; *sterilized*, by mineral acids, peroxide of hydrogen; sulphide of lime; resorcin, saccharated sulphur; lactic acid; creolin; ozonized sulphur water.

Sarcinæ Intestinalis. Cocci, or packets, in groups of four, or eight, very small size, but very regular in form, occur only in the intestines in cases of chronic diarrhea, and catarrh of the bowels.

Virginia stone crop is unquestionably the best remedy we possess; salol, naphthalin, resorcin, creolin come next in order; mineral acids are of some utility.

FOR A MORE ELABORATE DESCRIPTION WITH ILLUSTRATION OF THE DIFFERENT FORMS OF SARCINÆ IN THE ALIMENTARY CANAL, THEIR EVOLUTION AND DESTRUCTION, CONSULT PAGE 418 OF THE LARGE WORK ON "BACTERIOLOGY."

Sarcinæ Extremely small cocci, united into families of eight to sixty-four, present in the bladder in
Urine vesicular catarrh.

Sterilized by either boroglyceride, or uric acid solvent; the insertion of either a papoid, or trypsin bougie into the bladder, and permitting them to dissolve, speedily kills the entire brood.

Sarcinæ Cocci very small, but forming large packets, common in intra-uterine catarrh. It is
Uterinous. sterilized by the administration of the wine of aleteris, and the insertion of papoid or salix nigra bougie into the uterus, general tonics and alteratives.

Every form of thickening, or infiltration or
Gastric tumor on or in the walls of the stomach,
Tumors. whether it be simply an effusion of lymph, fibrous tissues, or an aggregation of tubercular germs, in the near future will be capable of being removed or dissolved by those newly-introduced remedies, papoid, trypsin, lactic acid in different strengths, and the local application of ozonized clay.

These remedies are remarkable for their solvent power over all adventitious tissues. The peroxide of hydrogen is best adapted to malignant growth.

The fluid extract of Virginia stone crop is most bracing to the walls of the stomach.

Acute inflammation of stomach; intense,
Gastritis. burning pain in the stomach, increased by
(Acute.) pressure; patient prone to lie on back with knees drawn up; tongue like a piece of raw beef, smooth, glossy; incessant nausea and vomiting; intense thirst; constipation or diarrhea; hiccough, delirium. The vomit at first is food, then mucus, then greenish, then coffee grounds, then black vomit.

External stimulations over stomach, either the mustard or turpentine poultice; nourish at intervals of two hours apart by the rectum with beef tea. Administer in alternation green root tincture of gelsemium, passiflora and opium. Convalescence on liquor cerii, bitter tonic like columbo, pepsin.

Met with in all degrees or stages up to the
Gastritis. acute. Symptoms very variable, from a gastric
(Chronic.) neurosis, tenderness on pressure, headache, heartburn, sour eructations, vomiting, constipation, sub-mucous coat of tongue red or else red in patches, to gastralgia, all the symptoms of indigestion.

Hydrastis, cinchona, mineral acids, collinsonia, gentian, nux, ozone water, gelsemin, hyoscyamus, passiflora, liquor cerii.

Stimulating plasters over the stomach, warm flannel clothing.

Cream, milk, eggs, arrow-root, rice, barley. All solid food must be well masticated. A milk diet is often curative. Drink-

ing warm water as hot as it can be taken relieves distress, overcomes nausea and vomiting. Forbid strictly the use of tea, coffee, tobacco, pudding, sauces, stimulants, fresh bread, corned beef, cabbage, pies and pork.

Glanders.

Farcy.

Bacillus Mallei.

Horses and other domestic animals placed in conditions adverse to health, either by exposure to cold, raw rainy weather, with no shelter, insanitary states, overcrowding, have the primary

elements of nutrition—the bioplasm of the living membrane of the nose, so changed, altered, degraded into a disease germ, the *bacillus mallei*, which has prodigious powers of reproduction.

Communicated to man, it gives rise either to a germ colony in the nose with profuse muco-purulent discharge or to engorgement of the lymphatics everywhere throughout the body, constituting two morbid conditions, glanders and farcy.

The diagnosis of the affection is easy, the history of the case, the presence of either the muco-purulent discharge or the contents of a lymphatic, placed in the field of the microscope, exhibit the micro-organism in the form of fine rods, about the size of the tubercular bacilli. They appear in the form of minute, transparent drops, consisting entirely of characteristic bacilli which are pathogenic of the disease.

If the virus, or microbes, or even cultures, find their way into the true skin, a secreting membrane, it enters the blood and assumes one or other, or two pathological forms, either excites by its presence, irritation, inflammation of the living membrane of the nose, which speedily passes into ulceration, with round, scooped-out ulcers, with elevated edges, and a central granulation, profuse muco-purulent discharge (glanders); or the microbe causes a general blocking up of the lymph canals, with engorgement (farcy). The microbe is a free ptomaine excretor of a most deadly alkaloidal poison.

The *bacillus mallei* is the essential cause of the disease and is pathogenic. Bears culture well in meat extracts.

Isolation and disinfection are important, washing out the nasal cavity with either solutions of glucozone, or sulphate of lime, or creolin or resorcin.

General treatment to build up vital force, and a remembrance that the microbe is both sterilized and completely annihilated in the presence of ozonized iodine, peroxide of hydrogen, sulphide of lime.

FOR A DETAILED ACCOUNT OF THE EVOLUTION, SPORULATION OF THE *BACILLUS MALLEI*, THE MICROBE OF GLANDERS, IN THE NASAL FOSSA, IN THE BLOOD AND LYMPHATICS, ITS ANALOGY TO NASAL CATARRH WITH ILLUSTRATIONS, NEW TREATMENT, SEE PAGE 424, LARGE WORK ON BACTERIOLOGY.

Sexual intercourse loose and varied, few women among many men, degrades the primary elements of nutrition of the genito-urinary organs into a disease germ, a microbe of low power, incapable of producing pathological changes in the blood. Masturbation in either case also degrades, alters, changes the primary molecules into a disease germ.

A gonorrhea is readily recognized by the irritation, inflammation, muco-purulent discharge, with burning and scalding in urinating.

As both sexes are liable to other discharges, the microscope must be brought into requisition to determine its nature.

The pathogenic micrococcus, the gonococcus, cocci, are seen singly or in pairs, groups. They are found in great abundance in the muco-purulent discharge from the urethra, in the pus of a soft chancre, in buboes, and in the urethra of those addicted to self abuse.

The microbe bears cultivation well in gelatine jelly or nutrient broth, and when applied to a mucous membrane, or to a crack or fissure in the skin, re-produces the disease in all its intensity.

The micrococcus is not only sterilized, but completely annihilated, by injection of the ozonized distillation of the eucalyptus; by the introduction of the thallin bougie; internally by bactericides, whose properties are not impaired by digestion, but are excreted by the urethra in fine molecules, which coming in contact with the micrococci kill them. These embrace copaiba, terebinthæ, petroleum, sandal wood, cubebs, kava kava, salol, santoline.

FOR A MORE ELABORATE DESCRIPTION OF THE MICROCOCCUS OF GONORRHEA, WITH SPLENDID ILLUSTRATIONS OF ITS EVERY-DAY GROWTH—ITS ETIOLOGY, EVOLUTION, NEWER TREATMENT, SEE PAGE 407, OF THE LARGE WORK ON "BACTERIOLOGY."

Gravel. Deposits of insoluble matter from the urine, in powdered crystals, or solid concretions, (*Uric Acid.*) with irritation of the entire urinary passages; reddish crystals or sediment; the urine usually high colored, less in quantity, acid to test paper—gout, rheumatism at base of trouble.

Remedies.—Mineral acids; cinchona; ozone water; uric acid solvent; benzoic acid; alteratives; alkalies give speedy relief.

Gravel Phosphatic Deposits.

White gravel; deposits of phosphate of magnesia, or oxalate of lime, in white shining grains, gray powder or iridescent pellicle over the surface of the urine, if it is left standing; urine alkaline. In dyspepsia, prostration of

vital powers, great brain waste.

Remedies.—*Avena sativa*; kepheline; cocoa; cinchona and mineral acids, hydrangea, biborate of ammonia, corn-silk, uric acid solvent.

Gravel (*Oxalic Acid*.)

Clear deposits of oxalate of lime mixed with brown or mahogany-colored granules, often present in nervous dyspepsia.

Remedies.—Tonics, alteratives; mineral acids, muriatic.

In gout, as in rheumatism, we have the *bacillus amylobacta*, but as there is still a greater poverty of nerve force of a peculiar kind, soda is set free in the blood, which unites with the acid forming the lithiate of soda—when the acid and alkali are kept apart in the blood by some brain vitalizer, there will be no gout.

The abnormal body, lithiate of soda, irritates various weakened tissues and parts; by preference, the covering of the smaller joints of the hand and foot. The pain is severe, persistent, and the swelling great, followed later on by a deposit of lithiate of soda. Besides the small bones of foot and hand, the brain, eye, heart, kidney, are favorite locations. It is met with *acute, sub-acute, chronic*.

The same treatment as for rheumatism with the addition of colchicum to wash out the urea—aided with drinking lithia water freely.

The diet should be liberal, all malt or effervescing drinks, or wines, should be rigidly forbidden.

Man has both instinctive and moral faculties, **Habits.** and is in addition a creature of habit, with too often a perverted appetite to the use of alcohol, tobacco, opium, chloral, arsenic. In the eradication of these states of perversion, absolute control of patient is necessary to success, then diminish dose by dose without the knowledge of the patient, and substitute coca with tincture of oats or full doses of *passiflora incarnata*, alternated with cerebrin, with two hours' massage morning and night, followed by electricity and massage.

Success is promoted by correcting abnormal condition of digestive functions by appropriate remedies. It is most important to keep patient well nourished. If digestion is good, any food can be taken and assimilated, and the difficulties of treatment reduced one-half. Give milk, eggs, animal broths, steaks, chops and all substantial food. Important to have occupation for the mind and body.

Hay Fever or Asthma.*(Bacillus Subtilis.)*

So called hay fever, because the pollen of certain grasses, coming in contact with the periphery of the olfactory nerve in the nose

and sinuses of the head, eustachian tube, lachrymal duct, give rise to altered nutrition, a degradation of primary elements into other living matter, a disease germ.

In every case of hay fever there exists in the affected individual a predisposition, a neurasthenic condition which permits of the pollen exciting, evolving this peculiar bacillus.

The recognition of hay fever is easy, there is an intense poverty of nerve force, a perfect state of neurasthenia, then the season and susceptibility, hay, roses, grapes, ragweed—general languor, lassitude, debility, headache, sneezing, lachrymation, goneness, cough, wheezing, bronchial irritation, pyrexia, general disorder of the whole body.

In microscopical examination of the nasal discharge the bacillus subtilis is seen in the form of cylindrical rods of variable lengths and breadths. Originally they appear as threads, which become developed into rods, and cocci. They are motile and provided with a flagellum at each end.

Precisely the same microbe can be obtained from an infusion of hay, or dog-grass, which can be isolated, and will grow prodigiously in any nourishing medium, by spore formation and division by segments.

The microbe is pathogenic of hay fever or asthma; bears cultivation well in any vegetable infusion. The inoculation of the cultures or their hypodermic injection into animals produces the disease.

The germ in its growth in individuals greatly broken down excretes a ptomaine of a very toxical character, which gives rise to great constitutional disturbance.

To sterilize and completely annihilate this bacillus there must be a union of different forms of bactericides, as it is often impossible to move patients from the sphere of contagion.

An excellent plan is to sterilize the lining membrane of the nose, by the introduction of cocaine nasal bougies; or by douching or painting the parts with resorcin or thymol jelly, or ozonized iodine; or inhalations of menthol, or thymol.

Bactericides, internally should be administered so as to sterilize the blood, thus prevent spore evolution; the best remedies for this purpose are the distillation of the pine needles; nitro-glycerine; nitrite of amyl; comp. syr. tolu; sulphate of sparteine; euphorbia pilulifera; pyridin.

FOR A MORE EXTENDED AND FULLER DESCRIPTION OF THE BACILLUS SUBTILIS (HAY MICROBE), WITH ILLUSTRATION, NEW MODES OF TREATMENT, SEE PAGE 350 OF THE LARGE WORK ON BACTERIOLOGY.

Hæmaturia. It may be from the kidneys, bladder or urethra. Try infusion of digitalis; gallic acid; turpentine, *uvu ursi*; cleavers, Warburg's tincture, *strophanthus*.
(*Bloody Urine.*)

General Measures.—Vapor bath, absolute rest, drink linseed tea; copious injections of warm water into the bladder. If bladder is filled with thick blood that cannot be passed or drawn through a catheter, inject into the bladder two ounces of warm water, five drops of hydrochloric acid and thirty grains of pepsin, and in a few hours the contents of the bladder will pass through; or papoid or trypsin as injection.

Hæmorrhagic Diathesis. Individuals possessing a sanguine temperament have a lack of cohesion in the fibrine and red corpuscles of the blood, associated with this the micrococcus hæmophilia appears in the blood, a coccus characteristic of hæmorrhage, bleeding from the nose, bleeding on the slightest scratch or injury. It may occur from special locations as from the nose, constituting *epistaxis*, from the lungs, *hæmoptysis*, from the stomach, *hæmatemesis*, from the kidneys, *hæmaturia*; from the uterus, *metrorrhagia*.

This diathesis can be overcome, the micrococcus destroyed by mineral acids and cinchona, ozone water, coca, digitalis, avena, kephaine and a diet rich in blood elements.

Hæmorrhoids, A varicose condition of the veins of the rectum, blind or bleeding; internal or external.
(*Piles.*)

Easily diagnosed by the itching, irritation, muco-purulent discharge.

An examination of the anus and lower bowel will reveal the tortuous vein either in a bleeding or blind state. Treatment should be directed to strengthening up the entire system, but especially the veins by general tonics and alteratives; the bowels should be regulated by either the cascara sagrada lozenge or tincture of *nux vomica* and belladonna, or sulphur. Bowel should be injected daily with either distillation of witch hazel or horse chestnut, or water acidulated with aromatic sulphuric acid; the suppositories of the horse chestnut of great value; same form of medication, with care has proved of greater efficacy.

All remedies failing, the hæmorrhoid tumors should be injected. An excellent formula for injecting and subsequently causing the obliteration of hæmorrhoids is the following: Two drachms each of carbolic acid, glycerine and fluid extract *ergotæ*, added to one drachm and a half of water. Mix. Inject from three to eight drops, according to the size of tumor; or the following: carbolic acid, olive oil, glycerine, of each, one ounce; pure creosote, twenty drops; muriate of cocaine, five grains. Mix. Inject from two to six drops.

Coagulation, absorption and obliteration of piles can be effected without the use of carbolic acid, thus: Fluid extract arbor vitæ, six drachms; fluid extract hamamelis, one drachm; fluid extract horse-chestnut, three drachms. Mix. Charge syringe with this; insert nozzle to centre of the hemorrhoid; inject from six to ten drops. If it does not entirely disappear this can be repeated in two weeks.

Piles can often be got rid of with an ointment made from the horse-chestnut, and also in the following manner. After the morning stool, throw in a copious injection of warm water into the rectum, then insert a piece of the following, about the size of a hazel nut, into the bowel, smearing all the internal and protruded parts with the same. Take one ounce of ozone ointment, the same quantity of butter of coca, then add two drachms of subnitrate of bismuth, one drachm of muriate of hydrastin; and when all are melted together, add three grains of cocaine, thirty drops of oil of eucalyptus; use when cool; inculcate rest, as little exercise as possible.

Inject into the rectum, afternoon and evening, one teaspoonful of the following mixture: Fluid extract of hamamelis and of hydrastis, three drachms of each; olive oil, two ounces. Mix. Internally, we have found the following unsurpassed: Tincture of nux vomica and tincture of belladonna, of each half an ounce. Mix. Dose: two drops in a little water one hour before meals and on retiring to bed. Remove all apparent or suspected causes. Rigidly forbid the use of beer, whiskey, fatty, starchy, saccharine food.

Headache depends on many causes: *nervous*, **Headache.** is the most common, dependent on a poverty of nerve force; *congestive*, due to worry, overwork exhaustion, stooping; *bilious*, from impaired action of the liver; *microbial*, due to inhaling germ laden air, as sewer gas; *reflex*, as irritation in stomach, bowels, liver; *anæmia*, exhaustion from loss of blood; *cerebral spinal anæmia*, a sensation as if a nail was being driven into the head.

Regulate all secretions; daily alkaline bathing; use the shower bath; flannel clothing, nourishing food, avoidance of brain tension or worry.

After cause has been removed, select special drugs to meet the different forms as passiflora; nitro-glycerine; nitrite amyl; coca wine; cinchona; gelsemium; guarana or caffeine; aconite; belladonna; sambul.

Inflammation of the Liver.—
Hepatitis. Nearly all affections of this gland
 (*Acute and Chronic.*) originate in a partial death or inflammation, caused by solar heat, malaria, alcoholic drinks, carbonaceous food. Generally ushered in with pain, acute or dull, and tenderness in the region of the liver;

pain in the right shoulder, dullness of the upper lobe of the right lung, enlargement of the liver, with great flatness or dullness on percussion, often cough; gastric and intestinal disorder. The stools show an excess or deficiency of bile; the skin jaundiced, depression of spirits. Copper taste in the mouth.

The acute form, with fever, is rare in temperate latitudes, but common where solar heat is high, malaria and whiskey drinking prevalent.

Remedies.—If there is fever, use aconite and belladonna. Nitro-muriatic acid is our best remedy, where bilious symptoms predominate; leptandra; apocynum; sulphur; ozone water, fringe tree; passiflora.

General Measures.—Often caused by too abundant, highly seasoned food, stimulating diet and drink, these must be avoided; bathing with water acidulated with nitro-muriatic acid. If the disease is not thoroughly got rid of, it will terminate in either dropsy or enlargement, with amyloid or fatty degeneration of the liver; to which the general term of *Cirrhosis* is applied.

Other Morbid States of the Liver, as neuralgia, cancer germs or parasites in bile, liver flukes, bacilli of all kinds. Treat on general principles, alteratives and tonics and liver stimulants, such as phosphate of soda, fringe tree, passiflora.

An affection due to the admission of a
Whooping Cough. micrococcus by the respiratory mucous
(*The Micrococcus*.) membrane, which enters the blood,
where it breeds, and when fully formed
makes nests in and around the cervical portion of the cord and medulla. Once the germ has become fully localized, it throws off spores every hour or two, incidental to which are immense ptomaine excretions which produce an embolic condition of the blood, and often clots in heart, lungs, brain. The micrococcus, if let alone, will take from 8 to 12 weeks to use up all the elements of its nutrition which exist in the body and then die.

Its diagnosis is easy, first indication languor, fretfulness, symptoms of a cold, periodic and spasmodic closure of the glottis on a deep inspiration, which, if long-continued, gives rise to an impending sense of suffocation, convulsions, attacks often terminating in vomiting.

A microscopical examination of the breath, saliva, expectoration and secretions of all children suffering from pertussis, exhibits elliptical cocci, mycelia, micrococci resembling the figure 8.

The microbe bears culture well, and is pathogenic of the malady. Cultures injected or fed to animals reproduce the original disease in all its virulence. It is a most active ptomaine eliminator; to this toxic principle is due all the embolism, complications and fatality of the disease.

When once recognized, sterilize and annihilate the *micrococcus* with one or more of either the following remedies: comp. syr. tolu; thymol; bromide, sozoiodol; ozonized tar syr. and creolin; tincture of iodine; siegesbeckie; sulphur water; resorcin; phenacetin in 2-grain doses instant death to the whole brood of micrococci; naphthalin fumes completely paralyze the germ, and in all cases the apartment in which the child is domiciled should be thoroughly disinfected by burning sulphur every other day—aerial disinfection of immense importance—inhalation, or breathing a germicidal atmosphere stops the development and prevents the spread of the disease; even burning naphthalin on a plate effective. Most nourishing diet; change of air.

FOR A MORE COMPLETE OR DETAILED DESCRIPTION OF THE MICROCOCCUS OF WHOOPING COUGH—GIVING ITS LIFE HISTORY, GREAT CONTAGIABILITY—THE GERM—NEWER METHODS OF CURE, SEE PAGE 459 OF THE LARGE WORK ON BACTERIOLOGY.

Hypertrophy of Clitoris.

May be congenital, caused by reading novels, dancing, posing, roller-skating, masturbation; ozonized extract sambul, bromide; salix niger; very large doses of the green root tincture of gelsemium; continued for months.

Hydrophobia, the Micrococci of Rabies.

Canine madness is a microbial evolution by placing dogs under adverse states or conditions which are inimical to their well-being, as solar heat, deleterious food, insanitary states, a deprivation of natural grasses, etc., etc.

The microbe is an outcome of perverted nutrition, communicated to man and other animals by the saliva, through some crack or fissure or abrasion, so it reaches the true skin.

Its diagnosis embraces the history of the case, appalling nerve prostration with extreme irritability, paroxysms very slight and long between at first, but gradually they become longer with shorter intervals between, till they run into one continued paroxysm terminating in death.

As the paroxysms increase in length, severity and frequency, they become more intense; face congested; eyes glaring, protruding from their sockets; keeps hawking thick viscid saliva from the mouth.

The microbe, as isolated from serous sacs and juices around the medulla oblongata and spinal cord, consists of small globular cocci, single or united into characteristic colonies; they are also found in the saliva but never in the blood.

The exceptional virulence of this microbe is due entirely to

its rapid reproduction or multiplication, with its prodigious ptomaine excretion of the most toxic character.

A FULLER DESCRIPTION OF THIS MICROBE IS TO BE FOUND AT PAGE 886 OF THE NEW WORK ON BACTERIOLOGY—A NEW TREATMENT.

Hydrops Pericardium. Dropsy of the pericardium. Easily recognized by the history of the case, increased area of dullness on percussion over the region of the heart; cardiac sounds muffled; cough, difficulty of breathing; œdema of feet.

If the rheumatism which caused the difficulty still exists push treatment for that, if it has disappeared, then that for dropsy, irritating plaster over the region of the heart, try either infusion of digitalis or tincture of strophanthus, follow with a powder of crude mandrake, grain iii; nitrate of potass, grain viii; bitartrate potass, one drachm; mix. Take it at a dose, repeat so as to give two motions of bowels daily.

Hysteria. Anæmia of brain and spinal cord, giving rise to morbid excitability of the nervous system, with convulsions, paroxysms and various disorders.

The peculiar pathological condition gives rise to distress at the epigastrium—a feeling as of a ball working up from the abdomen into the throat; convulsions, and a perfect *fac simile* of all disease in which spinal accessory nerves are involved, as tonic spasms, coma, epilepsy, chorea, lockjaw, heart, liver, abdominal disease, all simulated.

General alteratives and tonics, avena sativa, kephaline, nux, glycerite ozone, coca, pulsatilla.

Seclusion and rest, perfect isolation from all friends.

Massage for five hours daily by vitalized operator.

Electricity by induction and faradization.

Diet.—Most highly animalized possible, with oatmeal and boiled fish. Most perfect cures by this method in all cases.

Impotence. May be due to defects in the genital organs, or follow severe illness; due to blows on the head, apoplexy; diseases—as diabetes, diseases of kidneys, some forms of dyspepsia, later stages of chronic diseases, or the results of nervous excitability or timidity, self-pollution, excessive venery, excessive use of tobacco, opium, wine and some liquors, intoxication, champagne.

For Decided Impotency.—Some of the following formulæ will be found efficacious:

Take four ounces of the glycerite of kephaline; two ounces of the fluid extract of coca; two drachms of the fluid extract nux vomica. Mix. Half a teaspoonful added to a little water thrice daily; or

Take four ounces of the phosphated tincture of oats, the same quantity of the fluid extract damiana; half an ounce of tincture of cantharides; the same quantity of the tincture of nux. Dose. Same as above.

If associated with rectal incapacity or disease, take one ounce of the fluid extract Virginia stone crop, one of bayberry, one of stone root, and one of yellow parilla; add one drachm fluid extract nux vomica. Mix. Dose: One teaspoonful added to water thrice daily; or

Take of phosphate of zinc, ten grains; solid extract of damiana, two hundred grains; and solid extract of nux vomica, thirty-three grains. Mix. Make one hundred pills. One thrice daily. Or take three grains of sulphate of strychnine and add it to four ounces of hypophosphoric acid diluted. Mix. Dose: ten drops in water three times daily. Passiflora and muira puama excellent in all forms.

The most hopeless cases of impotency can soon be cured by the saw palmetto, kephaline, avena sativa (oats), and the persistent administration of fluid extract coca et celerina, and the use of the damiana urethral bougies, with medicated caps to the corona glandis. Direct medication to the glans of great utility.

A state of vital depression of some part of the body; usually caused either by the action of mechanical violence or by some poison, heat or cold, or noxious gases.

When a part is thus vitally depressed, there are pain, heat, redness, swelling present—it may be acute, sub-acute, chronic.

If the vital forces are properly stimulated internally and locally, it may terminate in *resolution*, or recovery, but if there be a failure in treatment, not energetic, or not a proper remedy used, or the vital forces of part greatly shattered, then the inflammation may terminate in one or other of the following effects: 1st. Effusion of serum; 2, effusion of blood; 3, effusion of lymph; 4, the breaking down of lymph or formation of pus; 5, gangrene, the process of dying; 6, complete death, mortification.

In every form, location, type of inflammation there is ever present some form of disease germ, the outcome of the degraded tissue which is implicated.

Whatever its type, wherever its location, an effort should be made to stimulate in it a moderate and healthy reaction. For that purpose cerebral and local stimulation. Keep the action of the heart between 65 and 75 with either veratrum viride, passiflora, aconite, digitalis, gelsemium. Locally, in all cases a stimulating germicide, adapted chemically to the affected tissue, as ozonized turpentine to serous membranes, pleurisy and peritonitis; concentrated ozone over joints, etc.

If unable to stimulate resolution, then the inflammation will terminate in

1. *Effusion of Serum*—which constitutes dropsy—the best remedies for which are digitalis, strophanthus, elaterin, vapor baths.

2. *Effusion of Blood*.—Hæmorrhage; rest, styptics, elevation, stimulants, heat.

3. *Effusion of Lymph*.—Lotions of ammonia, peroxide of hydrogen, boroglyceride, belladonna.

4. *Formation of Pus*.—Hot poultices, free incisions, peroxide of hydrogen.

5. *Gangrene, Process of dying*: Brandy, peroxide of hydrogen, poultices charcoal, yeast, capsicum.

6. *Mortification*.—Complete death.

Inflammation of the Labia and Vulva. Due to walking, dancing, roller-skating, posing, venereal germs, sexual excesses, which give rise to subcutaneous inflammation of labia, followed by suppuration and abscess.

Open the bowels, use poultices; apply lotions of boroglyceride, enjoin rest, give anodynes.

Infusorial Catarrh.
Asthmatus Ciliaris.
(Common Influenza.)

Commonly known as autumn and spring colds, often epidemic—due to the presence of a microbe, which is a flagellated infusoria, with body and cilia. It is pathogenic, bears

cultivation well in any nutrient fluid, and is pathogenic of this affection. While in the body, that is in the nose, head sinuses, eustachian tube, bronchi, blood, it is a free ptomaine excretor, which gives rise to headache, languor, debility, dysentery, congestion of lungs, pyrexia, and in some cases death. The germ is found in all the secretions of the body.

Usually the microbe is sterilized and completely annihilated by the administration of jaborandi to throw the germ to the skin, and internally administer some bactericide as thymol, resorcin, peroxide hydrogen, inhalations of either glucozone or menthol, or nascent chloride of ammonia, or ozonized sulphur water, or benzoate of soda.

In the treatment of various affections of the upper air-passages, also, good results have been obtained by local applications of menthol in the form of solution, vapor, or spray. Many have claimed quite a large percentage of cures of laryngeal phthisis by this means. In this country many report very decided improvement after the use of menthol in this disease, but they have not observed any actual recoveries. In nasal and pharyngeal catarrh much benefit is often derived from sprays of

menthol dissolved in oil or fluid vaseline in the strength of from one to twenty or thirty per cent. In hay fever many have found menthol to serve an excellent purpose as a substitute for cocaine. A ten or twenty per cent. solution in olive or almond-oil to the sensitive area within the nose by means of a brush or atomizer.

Any deviation from sanity. It is divided or **Insanity.** classified according to the most prominent symptoms—as *general insanity*, or raving madness; *monomania*, insane on one thing. *Dementia*, feebleness of mind. *Moral Insanity*, continued perversion of certain feelings, affections or impulses, with power of correct reasoning. *Hypochondria* and suicidal and homicidal monomania. *Insane Impulse*; irresistible impulse to do some insane and criminal act. 7. *Nymphomania*, insane excitement of the erotic impulse in chlorotic females.

The cases which induce insanity are functional or organic disease of brain; intestinal irritations; apoplexy; epilepsy; fevers; gastric or hepatic disease. Meningitis; delirium tremens, a microbe present.

The treatment, general alteratives and tonics, with moral and physical restraint, sulphonal to procure sound refreshing sleep, otherwise *passiflora incarnata* in large doses. *Hyoscyamus*, conium, bromide potass, cotoin, ozonized extract sumbul, kephalline, *avena sativa*, coca; nourishing food; milk; stimulants with discretion; alkaline baths.

Sleeplessness, get rid of the cause if possible.

Insomnia. Keep bowels regular, stimulate skin with baths and massage. These means failing, resort to medicaments. Give *passiflora incarnata* the first trial—it stimulates phrenal nutrition. If it fails try croton chloral, which contains more hydrogen than chloral hydrate—it is in fact butyl chloral. Its practical value is the property of diminishing sensibility before producing narcosis. Its action does not last so long as morphia; they, however, operate well combined. In croton chloral we have an instant remedy, more effective in neuralgia than all others. An excellent formula is the following: Croton chloral, grs. ii; sulph. quinine, gr i; glycerine, q. s. Make a pill. To be taken on the approach of an attack, and repeated every two hours, till relief is obtained. Another excellent formula: Croton chloral, 10 parts; glycerine, 20 parts; distilled water, 130 parts. Shake before using. The dose is half an ounce every five or ten minutes. It is best to begin small so as to avoid producing hypnotism. To procure sleep, 10 to 15 grains. Syrup of croton chloral hydrate is a most reliable and efficacious preparation of the drug. Sulphonal in 30 grain doses affords most refreshing sleep—dissolve in hot water and administer as it cools.

Intestinal Worms. Worms, some thirty-five different kinds, inhabit alimentary canal, but for all practical purposes they may be reduced to three.

Tænia solium, or tape-worm.

Ascaris Lumbricoides, or the round worm, and

Oxyuris vermicularis, or pin or seat worm.

The egg of each one respectively enters the alimentary canal in water and food, and will only lodge there if the bowels are weak and relaxed. They have general symptoms in common.

General Symptoms.—Irritation and pain in the bowels, fretful, peevish, restless, skin white, eyes partially open in sleep, dark circles around them, grinding of the teeth, clinching of the jaws, offensive, fetid breath, coated tongue, itching of nose, mouth, capricious appetite, cough, wasting, diarrhoea or constipation, shreds of mucus or pieces of worm, perhaps blood, tympanic abdomen; reflex symptoms, convulsions, chorea, spasm of glottis, hysteria, insanity, fever, nausea, vomiting.

Ascaris Lumbricoides—Common round worm.

Santonine administered every other night, followed by a cathartic on the following morning, is a parasiticide, a specific for this worm. Repeat for ten times.

Oxyuris Vermicularis. Pin or thread worms which give rise to much itching and irritation about the anus, giving rise to fits; causing spermatorrhœa and seminal emissions, as they inhabit the rectum and colon; they must be got rid of by injecting daily infusions of hydrastis or gold-thread into rectum.

Tape-worm.—Many remedies are enumerated for the expulsion of tape-worm, but the best before the profession, at present, are the valdivine; the tannate of pelleturin, and the crude pomegranate. Whichever is selected, the patient should fast for at least 24 hours before the remedy is administered. Some time after it is taken it should be followed by a cathartic.

.The following is a good formula for the expulsion of the worm: Pumpkin seeds crushed, one ounce; ergot pulverized, two drachms; pomegranate root, pulverized, one ounce; water, one pint. Macerate twenty-four hours, then boil down to four ounces and strain; then add croton oil, two drops; gum arabic, two drachms; male fern, two drachms. Mix. After fasting twenty-four hours, give little by little so it is all taken inside of an hour.

Naphthalin in capsules has been remarkably efficacious in getting rid of tape-worm. The remedy is simple, cheap, decided—ordinary precautions.

Valdivine is also a trustworthy remedy, identical with pelleturin.

Intra Uterine Catarrh.

Uterine catarrh, very common, occurs as the result of suppressed menstruation in menorrhagia, after miscarriage or abortion. Pain in the back, sense of weight in the pelvis in the morning on getting up, discharge of muco-purulent matter, pours right out; renders the patient sterile; gives rise to organic disease of the womb, and cancer.

In these cases, imbedded in the mucus, we find the pathogenic microbe of intra-uterine catarrh. So it is necessary, in addition to the usual course of alteratives and tonics and uterine restoratives, to insert into the cavity of the uterus about twice a week bougies composed of papoid, trypsin, iodol, so as to annihilate the germs.

Vaginal injections of solutions of boroglyceride, resorem, creolin are of great efficacy. These should be resorted to twice daily.

Inflammation of the iris indicates a shattered condition of nerve force, much below par, with either the germs of syphilis, tubercular or oidium albicans, or all, in the blood, mercury.

General Measures.—In all cases an alterative and tonic course, cinchona and mineral acids, saxifraga, avena sativa, kephaline, coca and very best nutrition. Stimulation to nape of neck in all cases. Solution of atropia dropped in affected eye.

Due to excessive production of bile from some source and cause, and its absorption into the blood, or to the obstruction of the gall duct. The germs of syphilis, of tubercle, malaria. Mercury, whiskey, are prolific causes, irritating the liver; obstruction with absorption; deficiency of nerve force.

General Symptoms.—Are those of irritation of the liver, yellow skin, yellow conjunctiva, urine orange or dark porter color, perspiration leaves a yellow stain, very drowsy, itching in skin, apoplectic symptoms, bile in the brain, clay-colored stools.

Remedies.—Aconite and nitro-muriatic acid always indicated, phosphate soda; hydrastis, sulphur, nux; glycerite ozone; ozone water; fringe tree bark; chloride of ammonia; passiflora.

General Measures.—Hot fomentations over the liver; warm clothing—light diet—vegetables and fruit; abundance of water.

Laryngitis. (*Acute.*)

There are two varieties—a mild form, confined to the mucous membrane, in which there is difficulty in breathing, cough, aphonia, constriction and heat in throat, with fever. The

other form is where the inflammation is in the sub-mucous tissue, with oedema, a tendency to suffocation and embolism of blood, painful, harsh cough; difficulty of breathing and swallowing; wheezing inspiration, loss of voice, anxiety, distress, lividity of neck and face, clutching at throat, high fever. Always extremely dangerous.

Large doses of veratrum viride, alternated with bisulphate of quinine; alcoholic vapor bath; hot linseed meal poultices to throat with peroxide of hydrogen. Change often; open bowels with saline drinks; mustard and artificial heat to feet; moist atmosphere; one half dozen atomizers at bedside charged with iodine. Give Dover's powder, increase veratrum till pulse is 60; passiflora always useful.

Very common; varieties, *simple*, *syphilitic*.

Laryngitis. *mercurial, tubercular*, and that form common (*Chronic*.) among clergymen, called clericorum, due to ranting; no will effort with exercise of vocal cords; cough, expectoration, hawking of mucus, peculiar rattle, ulceration, aphonia, or voice scarcely louder than a whisper, cough in paroxysms, croupy, emaciation.

Quinine, nux, glycerite of ozone, avena sativa, coca, glycerite of kephaline, saw palmetto; in all cases let the patient breathe moist atmosphere, vapors of iodine or boroglyceride ozonized, terebene, ozone concentrated; ammonia, muriate hydrastis for several hours daily, to destroy the germs, the factor of disease, and ulceration will heal.

Laryngismus Stridulus. Spasm of the glottis; difficult breathing; spasm comes on after inspiration; inflation of the lungs; lividity of the face; often comes with relaxation of spasm.

As a rule it is an affection of teething infants, but often met with among neurasthenic ladies. In children, irritation of special nerves, as the trifacial in teething; pneumogastric and vagus; worms in the intestines; whereas in ladies an anæmic state of the spinal cord.

During an attack, give a warm alkaline bath; hot compresses to chest and throat; dry mustard to the feet in socks, administer freely compound syrup lobelia.

The general points in the treatment would be to tone up the general system by every possible means, change of air, improved diet and brain tonics as cinchona, coca, avena, kephaline, etc.

Leprosy. A most highly infectious and extremely contagious form of skin disease, due to a hybrid microbe, the outcome of the bacillus tuberculosis and syphilis.

The Microbe. Its diagnosis rests upon the general constitutional disturbance

debility, mental depression, loss of appetite, chilliness with slight recurrent febrile attacks, and then a development upon the skin of isolated or scattered blebs of a dull red brown color, tender to the touch, slightly swollen, variable in size. These may disappear, and then return. But in most cases we notice ere long a slight but peculiar change in the face which is not easily mistaken; the skin of the cheeks a little below the eyes looks rather swollen and puckered, the nose appears somewhat thickened, the patient at the same time complaining of not being able to breathe quite freely through it, and the tone of voice is a little altered in consequence; he speaks, as we commonly say, "through the nose." As a further and later change, very characteristic tubercles develop in the skin, especially on the face and hands; these swellings are tender on pressure, and they produce much thickening of the tissues, and consequent alteration in the features. The skin of the forehead becomes thickened and tuberculated, its furrows deepened and its prominences exaggerated; this is especially the case on and over the eyebrows, and gives a peculiar heavy, morose expression to the countenance; the hair of the eyebrows is quickly lost, the nose becomes tumid with nodules and tubercles; the cheeks are irregularly thickened, the lips hard, swollen and sometimes everted; the chin is nodulated, and the ears, greatly enlarged, stand out stiffly from the side of the head. The whole appearance is hideous and revolting. One peculiar effect of these changes is to make young people look middle-aged.

Coincidentally with these changes in the face the dorsal aspect of the hands and feet may be similarly affected; the skin becomes brown, and the fingers, greatly enlarged, stand stiffly apart; the nails become dull, dry and fissured; some of the tubercles shrink and are absorbed, while others ulcerate and leave open sores very difficult to heal. Sooner or later the mucous membrane of the mouth, tongue and larynx becomes altered and thickened, and the voice assumes a peculiar hoarse whisper which is very characteristic of the disease. The eyes also suffer; the cornea becomes opaque, and a partial or complete loss of sight is the consequence. Coincidentally with these visible changes in the skin and mucous membrane we find alterations occurring in the nerves, and leading to the formation of patches of completely anæsthetic skin; they vary much in size, and are met with chiefly on the forearms, hands and feet, rarely on the trunk. In fact, in ordinary cases, the new growth and structural changes of all kinds are confined to the face, ears, hands, feet, forearms and legs, and mucous membrane of the mouth and throat. The ulnar nerve is particularly liable to be affected, and a nodular swelling may be easily felt just above the point where it crosses the elbow joint. Gradually all these symptoms increase, the constitution becomes greatly enfeebled, the temperature is commonly below normal, and the vital

powers exhausted; sooner or later some internal complication arises, and the miserable sufferer is carried off by disease of the lungs or kidneys.

In the blood and eruption, the microbe can be found in great abundance; it consists of fine slender rods, occasionally pointed at both ends, some clearly motile, others not. In the secretions from the mouth and eyes they have a beaded appearance. They are best cultivated artificially on blood serum or meat juice.

The microbe is pathogenic of the disease. Not a single sporadic case has ever occurred in this country, all are imported cases from parts of the world where it is common.

Chian turpentine mistura, and chaulmoogra oil are the only two remedies which sterilize the germ.

FOR A MORE ELABORATE DESCRIPTION OF THIS BACILLUS, ITS CAUSE, ITS DEPLORABLE EFFECTS, ITS INTRODUCTION INTO THIS COUNTRY UNDER THE AUSPICES OF OUR IMMIGRATION BOARD, ITS SPREAD, SEE PAGE 676 OF OUR LARGE WORK ON BACTERIOLOGY.

White cell disease of the blood—a
Leucocythemia. failure in raising the white corpuscles to red owing to a lack of vital force and a blocking up or infiltration of blood raising glands, as the spleen, lymphatics and pink marrow, with germ spores and products of inflammation.

Symptoms.—Persistent anæmia, extreme debility, vertigo, muscæ volitantes; tinnitus aurium; albuminuria; enlarged spleen, generally a signal of malaria.

Remedies.—Con. tincture kurchicine; bears foot; avena; kephaline, every possible means to raise the standard of vital force.

All mucous, or muco-purulent discharges from the vagina, are termed leucorrhœa,
Leucorrhœa. (Whites.) whether they be due to a damaged or relaxed condition of the mucous membrane of the vagina, to a catarrhal condition of the glands of the neck of the uterus or to intra-uterine catarrh.

All discharges from the vagina are loaded with germs, as the amœba, sarcinæ, various streptococcus.

Remedies.—Vaginal pastilles: when dependent on a constitutional defect, helonias, aleteris, pulsatilla, cinchona, hydrastis, mineral acids, vaginal injections of boroglyceride daily.

General Measures.—Improve the general health by every possible means, as the discharge is only evidence of debility, weakness of the vagina; injections with fountain syringe are very beneficial; medicate with hydrastis, witch hazel, white

pond lily, potass permanganate, boroglyceride; use ozonized pastilles.

Leucorrhœa. Discharge chiefly from external genitals; sometimes extends up the vagina.

(*Infantile.*) There are often consideration and anxiety regarding these discharges in very young children.

Ascarides, skin diseases, mal-nutrition, are usually the cause.

Lotions of boroglyceride or sulphur water are usually sufficient with removal of cause.

Locomotor Ataxia. An excessive formation of connective tissue, with wasting and disintegration of nerve fibres of the posterior columns of the dorsal and lumbar portion of the spinal cord. This state is preceded with incipient amaurosis, or some difficulty of vision from grave changes in the brain, stabbing pains in muscles; numbness in the limbs; lack of co-ordination in walking, an inability to stand with eyes closed.

Such changes in the cord and brain are caused by sexual excesses, with germs of syphilis and bacilli breeding in weakened nerve tissue, producing a sclerosis of the cord.

Confined exclusively to males.

Remedies.—Alteratives, tonics, saxifraga, cinchona, mineral acids, kephaline, avena sativa, coca. Iodol applied in the form of a plaster to lumbar portion of spine.

General Measures.—Massage, electricity by faradization, sea voyage, change of scene, flannel clothing, most nutritious, highly-animalized diet.

Lung Cavities. Vomica, or caverns in the substance of the lung are very common as the result of the massing of large numbers of the tubercular bacilli into one spot. The actinomyces make fearful havoc in the lung and leave large cavities. The venereal bacillus also does effective work; the pneumococcus does not possess this faculty to a great degree.

On the walls of all lungs diseased and cavities, in the sputum, the micrococcus tetragenus is ever present.

Generally they are found in groups of four (tetrads) surrounded by a hyaline capsule. When in the lung, groups of the characteristic tetrad are also present in the spleen and kidneys.

They are pathogenic of vomica—or caverns in lung structure—bear cultivation well in almost any nutrient liquid.

The presence of this microbe in the lungs gives rise to grave symptoms; its excretion of ptomaines of the most toxic kind seems to be unlimited and of the most deadly character.

The presence of these poisonous alkaloids gives rise to sweats, diarrhea, hectic fever.

The microbe is sterilized in the presence of the glycerite of ozone; glucozone; guaiacol; guaiacol plaster, etc.

FOR A MORE ELABORATE DESCRIPTION OF THIS GERM AND THE PART IT PLAYS WHEN THE TUBERCULAR BACILLI IS LODGED IN THE LUNG, SEE PAGE 409 OF THE LARGE WORK ON BACTERIOLOGY.

A seizure of malarial fever, or ague, is characterized by three distinct stages, a cold, hot and sweating stage—each stage may last a few minutes to several hours; or one or more may be absent. The fever is periodic, may come on every day, (quotidian;) or every other day, (tertian;) or every third day, (quartan;) during the interval between patient comparatively well.

In all countries where the temperature ranges over 75° or 80° F. this fever exists and is recognized by the above landmarks and the presence of a microbe in the blood.

The sole cause of this microbial affection is the spores or germs of decaying vegetable matter, an unpigmented amœboid entering the blood either through the salivary glands of the mouth, bronchial, mucous membrane or skin; these germs enter into the interior of the red corpuscle, live in it, receive their nutrition from it and increase in size at its expense, gradually becoming pigmented, the pigment granules become changed to hæmoglobin. Once the microbe of malaria occupies a red disc, it gradually usurps the entire corpuscle, and enters upon a cystic stage of existence, during which the pigment granules make their way to the centre, and segmentation of the periphery takes place, thus forming spores, which are subsequently set free. Each spore as fast as it is thrown off begins the same process.

The chill, or cold stage, corresponds to the segmentation, or shedding, or setting free of spores—the fever to their maturity, with excretion of ptomaines.

An examination of the blood before the rigor shows no segmentation, during the rigor the shedding process begins and free spores and unpigmented amœboid bodies are found.

The germ is pathogenic of the disease, will grow in any nutrient fluid, cultures injected into animals will reproduce the affection.

The microbe is sterilized by the exhibition of sulphate of quinine or comp. syrup tolu; completely annihilated either by the administration of comp. tincture of kurchicine, or Warburg's tincture; quinine, gelsemium and capsicum (See either of those

remedies). The remedy must be a bactericide, and have a special affinity for this germ.

General Measures.—During the period of rigor, stimulants and artificial heat; during fever, cooling drinks, with small doses of tincture aconite and belladonna; during sweating, frequent sponging with vinegar and water. During intermission drink one half to a wineglassful of the following wine, every two or three hours; one quart of port wine, one ounce of Peruvian bark, half an ounce of wild cherry bark, half an ounce of cinnamon, cloves, nutmeg and capsicum, to all one teaspoonful of sulphur can be added. In malarial districts, open fire-places, strict avoidance of all excesses, sleep in upper stories, remain in-doors after sundown, keep the bowels regular, eat the best food, keep mouth shut when out, daily bathing and warm clothing. No drink to be given while germicides are taken.

FOR A MORE DETAILED DESCRIPTION OF THE MALARIAL GERM, SPLENDIDLY ILLUSTRATED, WITH THE MICROBE IN THE *QUOTIDIAN*, *TERTIAN*, AND *QUARTAN* PHASES, IN THE CORPUSCLES, IN THE SPLEEN, PINK MARROW AND OTHER BLOOD FORMING GLANDS, SEE PAGE 326 OF THE LARGE WORK ON BACTERIOLOGY.

Remittent Fever is simply another type of malarial fever, caused by the microbe of malaria acting upon individuals whose vital forces are low, fever continues with remissions, same treatment as intermittent. (See Cinchona.)

Acute inflammation of the breast is ushered in

Mastitis. with swelling, tenderness, rigors and fever.

Suppuration is indicated by additional rigors; usually occurs during lactation.

Remedies.—Aconite, belladonna, bryonia; passiflora; open the bowels freely; give comp. conium pill,

General Measures.—As soon as hardness appears, poultice with linseed meal, and change every three hours; while changing rub the breast with ozone ointment and extract of belladonna, from the circumference to the centre. Keep this up during the night; smear the breast with concentrated ozone, and apply poultice; keep the breast firmly pressed. If abscesses form, open in the most depending part.

Chronic Inflammation.—Is generally limited to a few lobes, which swell and become hard; not much pain; put belladonna, rubbed up in ozone ointment, during the day, and concentrated ozone over night; cover with oil silk.

An excitement of the genital organs in
Masturbation. either sex, by the hand, a habit which produces the most disastrous form of brain wreckage, as is seen in the wide spread neurasthenia, chorea,

epilepsy, paralysis, imbecility, insanity; a morbid state of the sexual sense, which is either hereditary or acquired. It gives rise to intense cerebral and spinal anæmia, with all their horrors of despair. The repeated draining off of the vital fluid gives rise to suicidal mania, and renders its victim ambitionless, a cipher in this sphere of existence.

Best treated by general alteratives and tonics, keeping the secretions active, daily baths. Our best remedies are an aphrodisiac, of which tincture of the green root of gelsemium is the best. It should be administered in large doses, so as to cut off for the time being all erectile power and sexual desire, ozonized extract of black willow bark; very large doses of passiflora incarnata; suppositories of salix nigra are excellent; urethral bougies of black willow, belladonna, digitalis, hyosciamus are of utility. As soon as the abnormal appetite is appeased "avena or kephaline" should be administered in small doses to build up a more vigorous and healthy brain nutrition.

Measles.

A

Micrococcus.

This microbial fever originates by contagion and infection—the microbe or contagion is given off from the skin and breath, and lungs, persistently to books, clothes, furniture; hence it is spread more by one child to another and the clothing of individuals who have access to such cases than by the air.

Its diagnosis is easy, a stage of incubation of from seven to fourteen days, with languor, lassitude, debility, and sprouting; proliferation and ptomaine excretion take place during the three days of fever, after which the microbe emigrates to the skin where it appears for four days. During the premonitory stage, coryza, that is watering discharge from the eyes, nose, sneezing, some cough; headache, tongue white coated. These symptoms become aggravated during the stage of fever. When the eruption appearance on the fourth day of fever is on the face, it feels tense, rough, irregular, elevated in patches.

With the microscope round cocci and diplococci can be detected in the watery discharge, also in the sweat, saliva, and in the eruption of all patients who have measles.

The germ is pathogenic, bears culture well. Cultures either injected subcutaneously, or fed to animals, reproduce the disease.

In all cases the child should be kept in bed in a warm, dark room, with its atmosphere thoroughly saturated with some ozone generating, volatilizing substances, as eucalyptus, iodine, thymol, or creolin.

Warm diaphoretic drinks, bathing the patient thrice daily.

The micrococcus is both sterilized and completely annihilated by the administration of the comp. syrup tolu ozonized; resorcin; phenacetin, thymol, or any good bactericide.

The cause of death is due chiefly to the irritation of the mucous membranes, producing laryngitis, bronchitis, diarrhea, etc., but these are mainly developed among the children of the ignorant and careless; as soon as the rash has disappeared the child is allowed to run about out of doors, and, as the disease is most prevalent in the winter and spring, it proves to be then most fatal also. It is believed to be infectious during the stage of invasion.

FOR A GOOD DESCRIPTION OF THIS GERM SEE PAGE 406, LARGE WORK ON BACTERIOLOGY.

Rotheln, rubeola, or German measles, while **Rotheln.** resembling both measles and scarlatina in its symptoms, yet is incapable of inducing either of these diseases or of protecting from a subsequent attack of either, nor is a patient who has had both protected from this. Measles or rotheln may be confused with enteric fever, scarlatina, syphilis, the rash produced by gastric derangement, the rash induced by the use of drugs, such as cubebs, copaiba, iodide of potass, sulphate of quinia, and with the simple dermatitis known as erythema roseola.

Women between the ages of 15 and 45 **Menorrhagia.** menstruate, every twenty-eight days, that is have a sanguineous flow from the uterus. To be normal it should take place without pain and should not exceed in quantity four ounces; if more than that it is termed *Menorrhagia*, or excessive menstruation. Rest, strengthen the system by any means possible; give remedies to vitalize the uterus, such as prunella, aletris cordial, viburnin, nux, mineral acids, cinchona, coca, kephaline.

The causes which give rise to acute inflammation of the uterus are very varied, such as injuries from instruments introduced, cold, rheumatism, suppression of the menses, retention of placental debris. **Metritis.** (Acute.)

The symptoms: Inflammation of the uterus, acute; pain in the back, darting to the pubes and down the thighs; frequent chills; fever: pulse quick, wiry, feeble, or slow; breasts tender; painful; pain in sacrum in act of defecation, nausea, vomiting; gives rise to hysteria, induration, softening, abscess, gangrene.

At once apply ozonized turpentine over the lower portion of abdomen, and as soon as redness intervenes, hot poultices of linseed meal, and opium every three hours.

The safest remedy is to push either opium or its alkaloids to narcotism. If that can be effected, the patient is safe provided properly managed; vaginal and rectal injections of either solutions of creolin or boroglyceride are of utility.

Acute symptoms overcome, treat same as chronic inflammation.

Chronic metritis may be a sequel of an acute attack, but more generally it comes on of itself; it is very common, undermines the health of a large percentage of American women, but treated with rest, vaginal injections and pastilles; the sovereign remedy in all cases is the wine of aleteris farinosa.

Microbe of Boils.

This microbe in its evolution and microscopical appearance is almost identical with that of erysipelas, although it is essentially different.

The boil or carbuncle microbe is the outcome of perverted nutrition, mal-nutrition, by or through which primary bioplasm is degraded, altered, changed into a disease germ which seeks the oil or sebaceous follicles.

Incidental to this state of perverted nutrition, there is debility, headache, rigor, some fever, with heavy brown coated tongue, very fetid breath.

The boil or carbuncle is simply an aggregation of germs, a colony from which the microbe can be isolated either before or after suppuration, when the latter takes place, streptococcus pyogenes is also present.

The boil microbe is pathogenic, bears cultivation well, and cultures either eaten by or injected into animals produce the identical disease.

The proper course of treatment in all cases of boils is to correct the mal-nutrition by baths, well regulated bowels, good, but very nutritious food, administration of tonics, as comp. matricaria, and keep the blood thoroughly sterilized by the administration of two of the following germicide remedies in alternation either with ozonized lycopodium or sulphide of lime; sulphur water and resorcin; ozone water and iodol; brewers' yeast and thymol.

Locally, bactericides: inject into the centre of the boil a few drops of the C. P. peroxide of hydrogen, instantly annihilates every bacteria in the boil, cleanly wiping it out at any stage; still local germicides, as four parts of ichthyol, four parts; camphorated cerate, 15 parts. Mix. Apply on lint. This at once arrests microbe growth, and every other symptom subsides: salicylic acid and extract of belladonna.

FOR FULLER DESCRIPTION SEE PAGE 404, LARGE WORK ON "BACTERIOLOGY."

Microbe of Diarrhea.

All kinds of germs and micro-organisms abounding the human mouth, stomach and intestines, in both health and disease; in the former they are supposed to aid the digestive juices in breaking up the food, preparatory to its

formation into blood elements; in the latter, they are irritants, producing chemical changes inimical to health.

Each respective form of diarrhea has its pathogenic microbe, as the nervous, serous, mucous, bilious, choleraic, and ulcerative. Each has its special ptomaine or alkaloidal poison, which acts deleteriously upon the organism.

The frequent motion of the bowels, the ocular and microscopical appearance of the stools are guides for diagnosis.

To sterilize, and annihilate the entire crowd, which produces increased peristaltic action, intestinal *bactericides* must be used; there must be rest in recumbent posture; diet, sterilized milk and beef essence, then the proper remedy selected from out of the following, or those possessing a similar action, such as an infusion of baptisia tinctoria, kaki, cranes bill; or better still, *naphthalin*, which is sparingly soluble in the stomach, but much more in the bowels; it certainly does good work, checks the diarrhea by killing the germ and neutralizing its ptomaine. *Salol* is the phenyl ether of salicylic acid, it passes through the stomach unchanged, but in the duodenum it is split up by the pancreatic juice into salicylic and carbolic acids. Beta-naphthol has nearly the chemical properties of salol, and more powerfully germicide. Lactic acid, resorcin, thymol, menthol, benzoate of soda, ozonized mustard essence are weak, but often efficient bactericides, naphthalin in capsules.

FOR ILLUSTRATIONS SEE PAGE 282, LARGE WORK ON "BACTERIOLOGY."

A peculiar microbial affection, in which the germ localizes itself either in the parotid, testes, ovaries, mammæ, brain, an undefined period of incubation or sprouting, followed by rigor and a fever; most generally the microbe selects the parotid, giving rise to parotitis, some degree of pain and swelling, and dies in seven days, its pabulum becoming exhausted, extremely contagious and infectious.

The germ can be detected with the microscope, in the breath, saliva, in appearance it is round, oval, occasionally elongated. It is pathogenic. In artificial cultivations, they appear as white dots, and as they grow larger, become of a grayish color. They bear culture well in gruel, or any nutrient fluid, and if cultures are injected into any mammalia, will reproduce the original disease, either in the parotid, mammæ, ovaries, testes or cortical substance of the brain.

Confine patient to warm apartment in bed. Administer a mixture of tinct. aconite and belladonna to calm the irritable nervous system, alternate with some efficient bactericide such as either comp. syr. tolu, or resorcin, or phytolacca or siegesbeckie with salicylate soda.

No local application admissible, unless in severe cases the attending physician may order concentrated ozone, to which a little chloroform is added, applied over the parotid, testes, mammæ, ovaries, is instant death to the microbe.

Inflammation of Substance of the Spinal

Myelitis. *Cord.*—Is recognized by spinal pain; formication; tingling, numbness and coldness of extremities; at first convulsions, afterward paralysis which extends gradually, often affecting the sphincters. In the *chronic* form, unusual fatigue: then paralysis, tremors, tottering gait or inability to stand. Active treatment with cups.

Organic Disease of the Spinal Cord.—Including *Hypertrophy, Atrophy, Aneurism, Hydatids, Tubercles, Scirrhus.*—S: Pain, of various degrees and character; disordered sensations in limbs and surface; muscular weakness; paraplegia, paralysis of rectum and bladder.

Spinal Irritation.—Various symptoms, one being a constant tenderness on pressure over some part of the spine; symptoms as if from severe gastric, or pulmonary, or cardiac disorder; neuralgic pains.

General Measures.—In all obscure spinal diseases, alteratives and tonics; rest; constant applications of irritating plasters on both sides of the spine, massage. Innumerable remedies act specially on the cord or its membranes, as nux, rhus, cinchona, passiflora, cause an increase of blood to the part, whereas belladonna, ergot and like remedies diminish the flow.

Nasal Catarrh.

(*chronic.*)

Amœba.

Nasal catarrh is characterized by the presence of a microscopical vegetable organism in the nose, sinuses of the head, fauces, eustachian tubes, larynx, and bronchi, termed the amœba, a microbe of wonderful tenacity of life, and extremely difficult to sterilize or destroy.

Nasal catarrh is predisposed to by the presence of the tubercular and venereal bacillus, and other disease germs in the blood; but the exciting cause is the presence of the amœba, which gives rise to a copious, muco-purulent, microbial discharge, a sense of soreness or rawness in the nose; a hawking and trickling down the throat; germs migrate in all directions, upwards into the head; downwards in the bronchial mucous membrane, or œsophagus, giving rise to bronchitis and gastric catarrh; germs enter the blood, produce grave changes in that fluid as is seen in the white pasty face, headache, general prostration, goneness and persistent debility.

The amœba is pathogenic of the disease, grows well in almost any nutrient fluid; cultures inoculated or eaten by animals, give rise to the identical affection.

The amœba under the microscope 250 to 500 diameters looks

like $\circ \circ \circ$, breed by fusion, distension of their cellular walls, shedding off their embryonic broods; they are aerobic, take a thermal heat of 212° F. to destroy them.

The peculiar ptomaine which the germ excretes gives rise to nerve storms, as headache, epilepsy, chorea.

This microbe must be sterilized or annihilated in two directions (1) in the nasal and oral cavities; and (2) in the blood.

In the nasal cavity ozone, et chlorine by douche and spray; boroglyceride; resorcin; creolin; peroxide of hydrogen; myrtol; glucozone, etc.

For rendering the blood insusceptible to microbe growth, ozone water, saxifraga, sulphur water, phytolacca.

FOR A MORE DETAILED DESCRIPTION OF THE AMCEBA OF NASAL CATARRH, THE ACTION OF THE PTOMAINES IN CAUSING DEFECTIVE VISION AND DEAFNESS—IN PRODUCING PHRENAL LESIONS AND EPILEPSY, WITH AN ILLUSTRATION OF THE MICROBE, SEE PAGE 167, OF THE LARGE WORK ON "BACTERIOLOGY."

Is usually congenital, and consists in an enlargement of small, superficial arteries, forming a pulsating tumor.

Nævus.

Apply Monsel's solution of iron. If that is not sufficient, use creosote, or inject with carbolic acid and glycerine.

Nephritis.

Acute and chronic inflammation of the kidneys, may be caused by lifting, hoisting, mechanical violence, or by gout, rheumatism, uræmia, calculi.

(*Acute and chronic.*)

Deep-seated pain over the kidneys, aggravated by motion, pressure or jar. The urine very scanty, high colored or mixed with blood, nausea, vomiting. Fever, if it is the acute form.

Try one or other of the following remedies: Aconite, thalline, belladonna, gelsemium, uva ursi, queen of the meadow, digitalis—infallible in renal congestion.

In the *acute* form dry cups over the kidneys, followed by dry heat; hops or bran; mucilaginous drink like marshmallows; in the *chronic* form, locally irritating plaster, internally nitrites, cinchona, alteratives and tonics.

Nephritis.

Interstitial.

A gradual breaking down of the kidney; chiefly internal structure that gives way, with breaking down of its healthy substance; persistent presence of albumen in the urine. In heavy drinkers, or in scarlet fever patients, it takes on an acute form; urine highly albuminous and very scanty. It is met with generally in a chronic form, when the symptoms are most obscure, until it merges into dropsy. It has three stages: Congestion, degeneration, atrophy, or breaking down.

If the patient is tubercular and suffers from syphilis or a poverty of nerve force, the degeneration will be amyloid or starchy. If he indulges in alcoholic drinks, the degeneration will be fatty.

Prognosis.—First stage: If treatment is good, recovery; at stage of degeneration, recovery rare; and atrophy or tumbling in of kidneys, is invariably fatal. Common cause of death is uræmia.

Remedies.—Alteratives and tonics; gallic acid and port wine; digitalis, coca, cure numerous cases; phosphorus, glycerite of ozone; kephaline; avena sativa; nitric acid, aromatic sulphuric acid; cinchona, nitro-glycerine, apocynum.

General Measures.—Adopt measures to keep the skin active and promote free diaphoresis, give vapor baths; salt water baths, sponging with salt and alcohol; flannel clothing; avoid changes of temperature; open air exercise, never to fatigue the body.

Milk, eggs, fish and beef, for diet.

Due to a weak or devitalized condition of some special nerve, and either a disease germ or its ptomaine, toxically affecting the same.

It is easily recognized by the pain shooting along the course of a nerve, irregular, intermitting.

Receives different names from its location: in the head or face, *facial*; in the heart, *angina pectoris*; in the stomach, *gastralgia*; in the bowels, *neuralgic colic*, kidneys, *nephralgia*; and in the sciatic nerve, *sciatica*.

First Indication is to relieve pain; the application of concentrated ozone, aconite and belladonna, aconite cerate, chloroform liniment, oil of cloves, peppermint, chloroform, and oil of wintergreen; protect the part well from exposure to the cold or damp; the second indication is to kill the germ; neutralize its ptomaines; alteratives, one of the best is simabacidia; adapted to all cases, forms both a tonic alterative, nerve vitalizer, and tonic, general treatment is kephaline, oats; wear warm clothing; rest; freedom from care; avoid overwork; bathing; regulated secretions. The best local remedy is concentrated ozone.

Diet.—In all cases give diet of the best.

Neuralgia of the Breast. (Mastodynia.) Neuralgia of the breast, with extreme pain and tenderness, may be due to blows, contusions, the irritation of corsets, most commonly due to some irritation of the uterus, ovaries, or clitoris.

The removal of cause, tonics, coca, avena, kephaline, simabacidia, passiflora. Locally belladonna, concentrated ozone.

The result of the presence of the micrococcus of gonorrhea, rheumatism, gout, sexual excesses. General alterative and tonic course of treatment.

Neuralgia. (Testes.)

Use belladonna, coca et celerina, cocaine suppositories, liquid ozone; sumbul, gelsemium, saw palmetto, pulsatilla, passiflora, locally concentrated ozone.

Neuralgic states of the uterus, becoming fearfully common, some rare case due to irritation, others to microbes. The most common cause is often overlooked. The demands of our modern education and the excitements of "society," keep the demands of the brain and nervous system for nutriment so active that there has not been sufficient to complete the growth of the sexual system. She now comes to perform an adult function with an infantile organ. The effort is imperfect and painful. The reproductive organs must be given a chance to catch up with the rest of the system in its development. Cases where neurasthenia or mal-nutrition are prominent are best treated by a course of "rest cure," seclusion, milk diet, massage, and electricity.

Medical treatment with coca, avena, kephaline internally; but locally the pastille and suppository of cocaine stamps the neuroses out. Uterine restoratives like the aleteris cordial are of utility; so also is pulsatilla and passiflora incarnata.

In all cases, hygienic treatment is among the best of all curative means. Nutrition, exercise, healthful mental and moral surroundings are of the utmost importance. Young ladies must receive special attention with regard to these matters, and all undue drains upon their vital forces, as to close confinement in school, at music or art lessons, late hours, and the dissipation of society must be discontinued. Local treatment is seldom necessary.

Poverty of nerve force gives rise to the evolution of a striking pathogenic microbe, which admits of artificial culture. It can be easily isolated from the blood of every individual who suffers from any nervous malady, besides it is to be found on the tongue. In languor, debility, headache, neuralgia, epilepsy, spermatorrhea, impotency, suicidal mania, and in all forms of insanity, the blood literally swarms with the microbe. It is the presence of this microbe which renders suicide, spermatorrhea, impotency, endemic, and mental aberration contagious.

Men on account of their great development of the sympathetic are more obnoxious to the ingress of this microbe than females. Contagious and infectious in the true sense of the term, close contact being necessary.

The presence of this microbe in man strikes at the origin of

life, the reproductive organs, saps his sexual vigor; causes the disappearance of spermatozoa in the prostatic secretion, and in their stead spermatie crystals appear, which are devoid of all vitalizing or fertilizing elements.

Annihilate this microbe with bactericides; languor, debility, neuralgia, suicidal mania, sexual callousness will disappear; even the same remedies in epilepsy, chorea, insanity, will tend to cause a marvellous improvement, and bring the number of such cases to a cipher.

The remedies to completely wipe out this microbe are prolonged vitalized massage, electricity, cerebrin, glycerite of keph-
aline, *avena sativa*, *passiflora*.

The diet should be rich in brain elements, phosphates, broiled animal food; boiled fish, eggs, poultry, game, abundance of rest. A highly oxonized salubrious atmosphere, perfect freedom from care, worry, anxiety, daily bathing, gentle exercise.

FOR A MORE DETAILED DESCRIPTION OF THIS IMPORTANT MICROBE, ILLUSTRATED, WITH A DESCRIPTION OF MASSAGE AND ALL THE NEWER REMEDIES, SEE PAGE 704 OF THE LARGE WORK ON "BACTERIOLOGY."

An insatiable irresistible desire on the part of the female for coitus; precisely the same pathological condition as satyriasis in the male; a peculiar form of sexual neurasthenia often terminating in a conglomeration of nervous affections as chorea, epilepsy, paralysis, mental aberration.

Several methods of treatment, tincture of green root gelsemium, bromide of potass and soda, digitalis, belladonna, *passiflora* *pulsatilla*, have succeeded admirably.

Isolation, rest, massage, electricity, also excellent methods.

Obstetric Epitome. *Pregnancy.*—Conception consists in the fertilization of the ovum or egg of the female, by the spermatozoa of the male, in the ovaria; then fecundation takes place. There must be a union of the two materials furnished by both sexes; that is, the spermatozoa must unite with the egg in the ovary and fertilize it; and the embryo results from the union. The spermatozoa is ejaculated into the vagina; the uterus, by inhibitory action and vermicular movements, takes it into its cavity and passes it along the fallopian tubes to the ovaries. It may occur without the patient being conscious of its occurrence, or against her will. The most favorable period for conception to take place is either before or after a menstruation. After the ovum is impregnated, it increases in size and becomes prominent on the ovarium; then absorption of its peritoneal coat takes place; and when free is seized by the fimbriated extremities of the fallopian tube, and

carried into the cavity of the uterus. The ovum as a general rule is found in the uterus twenty days after impregnation, sooner or later.

After the exfoliation of the ovum from the ovary, an effusion of blood takes place into the cavity in which the egg was embedded, and this is followed by a corpus luteum.

The human impregnated egg is very small, about the size of a dwarf pea. When impregnation takes place, the internal os uteri becomes closed by a soft gelatinous substance, and the internal lining membrane of the uterus throws out a flocculent or downy substance, which fills the cavity entirely. This is called the *membrana decidua*, and into this downy bed the ovum drops when it makes its exit from the fallopian tube, and if not disturbed will form its attachment near the point of ingress and cause a growth of that part with which it comes in contact, and is called the *decidua reflexa*. So that the decidua is now divided into that portion lining and in contact with the uterus, called the *decidua vera*, and the other portion called the *decidua reflexa*.

The embryo then becomes covered with two membranes, the chorion and amnion. The amnion is an internal lining serous membrane, which furnishes a fluid for the protection of the embryo; allows space, facilitates motion and development of the foetus, and wards off shocks, jars, concussions.

The chorion or outside covering furnishes a means of communication with the uterus. The ovum, after its establishment within the uterus, consists of the decidua, decidua reflexa, chorion, amnion, liquor amnii, foetus and umbilical cord, with one extremity attached to the child, the other to the membranes at the point of attachment in the after-birth. The after-birth or placenta is a plexus of vessels by which the circulation is maintained between mother and child, and by which the latter is nourished. When of full size it is from six to eight inches in diameter, and its thickness varies from a line to one inch, or more, at its centre. It has two surfaces, one attached to the uterus, which is rough, spongy, traversed by ditches, and the foetal side, which is lined by the amnion, which is smooth.

For the first three months of intra-uterine existence, this twig of humanity is called an embryo; the latter six, a foetus. As soon as impregnation takes place, the walls of the uterus become greatly infiltrated with blood, which increases the size of the vessels, from being very small and convoluted, to that of large and straight, the muscular fibres grow with perfect regularity. This increase of growth and development for the first three months is very great, so much so that the specific gravity of the uterus is so much that its broad ligaments are unable to hold it up, and it descends very low into the cavity of the pelvis, often nearly protruding. After the fourth or fifth month this difficulty is entirely obviated by the uterus floating above the pubes, and

at six months it is still higher. After the fifth month there is a gradual distension of the body of the uterus, which encroaches upon the neck, distending it, merging it into the body, and causing it to become shorter and shorter, until from the eighth to the ninth month, it is entirely obliterated, that is, merged into the body.

Parturition.—A physician when called to a case of labor should take with him his pocket and obstetrical cases; some chloroform, ether, concentrated ozone, obstetric cones, ergot.

For all highly civilized women, with a curved sacrum, the left side in a doubled-up position near the foot of the bed, with a sheet or something to hold by, during the pains of labor, is the best. This must be from below, up. Women lowly civilized with nearly a straight sacrum do about as well on their back or in a kneeling position.

Examination.—Place the patient on the left side, ascertain the condition of the bladder and rectum; if loaded both must be thoroughly emptied.

During a pain insert the index finger of right hand, well oiled; note carefully the condition of the vagina, the state of the membranes, capacity of pelvis, and determine, if possible, the presentation and position. Allow the finger to remain during the interval, and when the next pain comes, if not too long, make out the presentation before the membranes rupture. Do not press on the membranes during a pain.

Presentations.—Labor and conception occur usually at a monthly period—the normal period of parturition corresponds to a menstrual, so that pregnancy occupies 280 days, more or less, as impregnation takes place before or after menstruation.

So true, so admirable, so energetic are the vital intelligences of the uterus, that it parts with its contents like ripe fruit from a tree.

When the uterus is ready to drop the fruits of conception, a certain portion of the fœtus (by specific gravity the head) presents or appears at the os uteri.

The head is the type of natural labor and in this state it presents itself as follows:

Vertex Presentations.—The head, the occiput, presenting, may be placed in six different positions at the superior strait; hence the six kinds of natural presentations of the head, namely—

1. *The anterior part of the cranium pointing to left sacro-iliac synchondrosis, or left occipito-anterior.*—In this position the anterior fontanelle is found at the right sacro-iliac symphysis, the sagittal suture running obliquely across the pelvis, from left to right, posteriorly.

2. *The anterior part of the cranium pointing to right sacro-iliac synchondrosis, or right occipito-anterior.*—In this position, the forehead of the child and the anterior fontanelle will be found

toward the left sacro-iliac symphysis, the sagittal suture running obliquely across the pelvis anteriorly, from the right to the left, posteriorly.

3. *Anterior part of cranium pointing to the symphysis pubis, or occipito-ubal*, in which the occiput faces the symphysis pubis of the mother, and the anterior fontanelle will be toward the sacrum.

4. *The anterior part of cranium pointing to the left foramen ovale, or left occipito-posterior*, in which the occiput looks toward the left sacro-iliac symphysis of the mother, or posteriorly to the left of the pelvis, the sagittal suture running obliquely across the pelvis from left to right.

5. *Anterior part of cranium pointing to right foramen ovale, or right occipito-posterior*.—In this position, the forehead of the child, or its anterior fontanelle, will be toward the left acetabulum, the sagittal suture running obliquely across the pelvis anteriorly, from the left to the right.

6. *Anterior part of cranium pointing to the promontory of sacrum, or occipito-sacral*, in which the occiput faces the sacrum of the mother. The anterior fontanelle will be found toward the symphysis pubis. Hand positions are diagnosed by the hardness of the bones, position of sutures and fontanelles.

In order *thoroughly* to master these positions, let the student take an articulated pelvis, and a foetal head, and he will easily gain a thorough knowledge of the various positions. Take the vertex or occiput for a guide, and place it, anteriorly or posteriorly, in the maternal pelvis, then begin with its anterior positions, as the vertex to the left anterior, to the right anterior, left posterior, right posterior, etc. In this way a more accurate knowledge of the presentation can be obtained in a shorter time than could be acquired for months otherwise. It is true that in the first, second, fourth and fifth positions, nature, if properly aided, will terminate the labor; and it is also true, that a physician well skilled in the diagnosis of these positions, can easily recognize the third and sixth as being invariably attended with difficulty and delay, and can also rectify these by a slight rotation of the head, into either of the first four positions. A correct appreciation of these positions is indispensable to every one practicing midwifery.

Unnatural Presentations.—The most common is the face, which usually presents in two positions. The first is when the forehead is to the left ilium; the second the reverse of this.

The presentation of the breach or buttocks, easily diagnosed by the slow labor, softness, cleft between the buttocks, anus, meconium, os coccyx, scrotum or vulva.

Presentation of the superior extremities occurs about once in 230 cases, shoulder, arm, elbow and hand. The back of the child, either looks toward the abdomen of mother, or backward

toward her spine; here labor is impracticable, version or turning should be promptly resorted to. No delay.

Rigidity of the neck of the uterus.—Internally.

Alternate belladonna with gelsemium. These two remedies act like magic in producing dilatation and producing uterine contractions. Locally apply belladonna cerate to os uteri and resort to hot hip baths, warm vaginal injections with lobelia. The obstetric cones are the best of all remedies to effectually overcome a rigid os uteri, two inserted well up in the rectum, the same in the vagina.

Tough membranes.—If they are tough and served their purpose as a dilating body and retard labor, notch the finger nail like a saw and rub it to and fro over membranes and they will give way.

Be sure that the bladder and rectum are empty.

If the perinæum is rigid, unyielding, apply hot fomentations, as hot as can be borne. These failing, steam the pelvis with hot water in which either tobacco or lobelia is steeped. If the vital force is feeble, stimulate, give sulphate quinine, capsicum in warm milk, hot milk punch.

Inertia of uterus during labor. Try injections into rectum, friction to abdomen. Capsicum, prunella, with quinine, is the best remedy. Beef tea, stimulating hot drinks, pulsatilla, passiflora.

Ergot should not be given in labor to facilitate or hasten unless the parts are fully dilated, position normal and head presenting at outlet.

The practice of administering ergot early in labor is most detrimental, giving us, as a result, still-born children and often sudden death of the mother from thrombosis. Freshly pulverized ergot in infusion is the best.

Painless Parturition.—Ladies who take abundant exercise, eat wholesome food, live hygienically, keep the bowels regular, have remarkably easy labors. To render it almost painless take $\mathfrak{z}\text{iv}$ concentrated ozone, $\mathfrak{z}\text{i}$ of chloroform. Mix. Repeatedly bathe the entire abdomen and back during the progress of labor, at the same time insert two obstetric cones well up the rectum; the same number up the vagina, this can be repeated at intervals of half an hour apart.

Bandage after Delivery.—After the delivery of the child and after-birth, the patient should be bandaged with a roller, reaching from the middle of the thighs to the ensiform cartilage, pin firmly below and somewhat easier or looser as it ascends; pin closely at every three-quarters of an inch. It has advantages. It relieves after-pains and prevents hæmorrhage, maintains the rotundity and natural shape of the abdominal walls, obviates the pendulous abdomen, so common. It ought to be worn at least two months.

Antiseptic Precautions.—The washing out of the vagina with warm lotions of boroglyceride is of great efficacy.

After-pains.—After the first confinement there is always more or less inertia of the uterus, with some irritability, hence after pains, slow contraction of the uterine walls, retained placental debris, coagula.

The following mixture is most efficacious: Aqua cinnamon four ounces; sulphate of morphia four grains; bicarbonate of soda twenty grains.

Mix. One tablespoonful every three hours is excellent for after-pains, as it relaxes the neck of the uterus, permits egress of clots or pieces of membranes. If it fails, loosen the bandage and apply hot fomentations, vaginal injections, warm, to hasten expulsion of clots. Rubbing the abdomen gently with concentrated ozone is of great utility. The insertion of one or more cones of great efficacy. Aid nature every way possible by hot diaphoretic teas, catnip, sweet marjoram, *passiflora* and *pulsatilla* are efficacious in mild cases.

Hæmorrhage after delivery.—This may be due to retained placenta, to shreds of membranes, to clots, to profound relaxation from long, hard labor.

The placenta must be removed, the uterus cleared of its contents, vagina and rectum both thoroughly washed out with hot injections of boroglyceride, and the roller with compression over the uterus applied.

Keep patient very quiet in a recumbent posture, head low, elevate the foot of bed, give cold drinks, allow no excitement. If these means fail, give the mixture of turpentine, alcohol and sulphuric acid, or ergot, quinine, alum, iron, sulphate of alumina.

Retained placenta.—If due to inertia, use friction over the abdomen, inject the vagina and rectum. Give ergot, quinine, caulophyllin. If the placenta is adherent, wait some hours, evacuate the bowels, put dry heat over the uterus, give hot stimulants. Cause the patient to sneeze. Hot punch. All this failing, insert the hand, in form of a cone, back of it well oiled, into the cavity of the uterus, grasp the placenta. The pressure of the hand usually excites contractions; if it does not, it must be detached. Leave no fragments. If there is an hour-glass contraction, withdraw hand, administer several teaspoonfuls of tincture of lobelia with a few drops of tincture of belladonna and gelsemium. As soon as the physiological effects of remedies and relaxation are complete reinsert the hand, when it will readily pass through the contraction, then seize the placenta and withdraw. The above effectually relaxes the circular uterine fibres.

Prolapse of the Cord.—If there is no pulsation in cord, it is unnecessary to interfere; if there is pulsation, return it if possible.

Place the patient in a kneeling posture, and, if possible, return it with the hand, or by means of a loop of tape, attached to the

end of a gum catheter. If this is unsuccessful, terminate labor speedily, by use of forceps or otherwise.

Placenta prævia.—Place the patient on the back, with hips elevated, shoulders low, and if the neck of uterus is not dilated sufficient to admit the hand, pack the vagina with the tampon. Do not leave this too long, about three or four hours. See to the bladder and rectum. As soon as the parts are dilatable and presentation of placenta complete, insert the hand, push it past that portion which is detached, and rupture the membranes if they are entire, and seize the feet, bring the toes down, pointing to either of inner aspect of the mother's thighs, and deliver as rapidly as possible.

Turning.—Version or turning is necessary in placenta prævia; prolapse of the cord; the shoulder, or arm, or transverse presentation, rupture of uterus, death of mother, convulsions, mania.

Try first, if os uteri is not dilated, or but slightly so, to determine the position of the head, and by combined action of both hands, gradually work the head downward and up, until the head is brought to present at os uteri, when the membranes should be ruptured, one finger into os uteri, the other hand use for manipulating the abdomen.

If the above cannot be done then it is necessary to wait till the os is dilated or dilatable. Keep patient anæsthetized with a mixture of alcohol, 1; chloroform, 2; and ether, 3. Mix. Bring the hips to edge of bed: Bare your arm and anoint the back of hand and arm with sweet oil. Insert it up in form of a cone into the vagina; pass it on between the membranes and uterine walls. Carefully search for the feet, rupture the membranes and seize them; bring one or both down, the toes pointing to thighs of the mother. Once over the breach, as in the pelvic basin, terminate labor in the natural way.

Instrumental Delivery. The use of the forceps. The parts must be dilated; empty the bladder and bowels; keep the patient anæsthetized. This is not, or may not be, necessary, if child's head is at the outlet. Immerse the blades in warm water. Place the patient across the bed, hips at the edge, separate the thighs and have some one to hold them. If the membranes are still intact, rupture them. Lard or oil on the convex surfaces of the blades; stand between the limbs of the patient. Take male blade into left hand; hold it nearly upright; pass two fingers of the right hand a short distance into the cervix on the right side between the foetal head and uterine wall, then introduce the point of the blade along inside of fingers, and pass it gradually, lowering the handle until the convexity of the child's head is grasped by the fenestrated portion of blade; depress the handle near the perineum. Here take the female blade in the right hand, and begin by holding the blade in an upright position, in the same way, but by reversed movements, pass the blade into the right side of the cervix and vagina, bring the handle

down and lock the two. Operate with gentleness, don't apply force.

Traction.—Make the traction only during a pain. If the head is high, the direction should be first downward, and, as the head gradually descends, move upward until just before the head escapes from the vulva, when traction is at almost right angles with the long axis of the patient's body. As a general rule the direction in which the blades point denotes the line of traction.

Craniotomy. Place the patient in the same position as when the forceps are applied. See that the bladder and rectum are empty; pass the fingers of the left hand up to the foetal head and carefully pass the perforator along palmer surface until it reaches the head; take care that you do not injure any of the maternal soft spots. Perforate the cranium, break up and evacuate its contents. Sometimes nature enforces the expulsion of the child.

Twins. As soon as the first child is born and separated from the mother, apply a bandage about the abdomen, and wait for expulsion of the other. Do not attempt the removal of placenta of the first child until after the birth of the second one. If the two placenta remain in the vagina twist the cords together and deliver in the ordinary manner.

Obstruction of the Bowels.

Mechanical impediment to the evacuation of the bowels. The ordinary symptoms are distension of the abdomen, colicky pains, nausea, vomiting sometimes of mucous, greenish or bloody matter, hiccough, tympanitis, feeble pulse, haggard looks, tetanus.

The obstruction may be due to strangulated hernia or to an accumulation of impacted faeces; to solid concentrations of chalk, magnesia, indigestible matter; to spasmodic or permanent stricture; to inflammatory adhesions of bowel to walls of abdomen; or by adhesion of bowel, or by external violence or otherwise; to intussusception or invagination of the bowels, the introduction of one portion within the other, most common in loose, flabby persons.

Remedies.—Very large doses of sweet-oil and opium, copious warm water injections, lobelia and hyoscyamus. Peroxide of hydrogen in infusion of flaxseed is one of our best remedies, as it evolves large volumes of ozone gas in the bowels which relieves the obstruction; concentrated ozone over the abdomen. Prolonged anæsthesia, massage.

Ophthalmia.

Inflammation of the mucous membrane of the eye and inner aspect of the lids. (Conjunctivitis.) Different varieties: *infantile, common, acute, purulent, gonorrheal, granular, tubercular* and *rheumatic*. All contagious and infectious (except the rheumatic), because they contain the living, breeding germs of disease. They have some symptoms in common, red, swollen,

a sensation of sand in eye; muco-purulent discharge; intolerance of light; in the infantile, common, acute and purulent, the discharge is loaded with bacteria; in the gonorrheal, the syphilitic and bacterial germ; in the tubercular there is *no* redness, *no* muco-purulent discharge, but intolerance of light is extreme, and in the watery discharge tubercular bacilli are abundant.

Remedies.—Aconite, belladonna, salines for bowels, cinchona, mineral acids, kephaline; keep pupil dilated with atropia.

General Measures.—Confine patient to bed, in dark room. Treat for fever; skin and bowels active. Apply stimulants to nape of neck, as the ophthalmic nerve originates in the cervical portion of cord. Drop a few drops of a solution of atropia into each eye, morning and night. Wash out affected eye three times daily with a tepid solution of boroglyceride, and keep the same applied to the eye. Enforce rigid antiseptic precautions, and avoidance of all insanitary states. Destroy cloths that have been used as dressings as soon as inflammation subsides. Alteratives and tonics, keeping up stimulants to neck. To the tubercular form, emetics of lobelia once or twice a week; weak salt water lotions to the eyes, with saxifraga internally is best; to the rheumatic form, where there is no muco-purulent discharge from eye, dry heat, quinine and glycerite of wintergreen are of great utility.

Diet.—In all forms, the very best.

Ophthalmia. Inflammation of the edge of the lids (ophthalmia tarsi) is usually dependent on the presence of the germs of syphilis or tubercle in the blood, or insanitary states, mal-nutrition.
(*Tarsi*.)

Remedies.—General course of alteratives and tonics, cinchona, mineral acids, saxifraga, phytolacca, kephaline, avena sativa, coca.

General Measures.—Once or twice a week paint edge of lids with citrine ointment. Use nightly a lotion or wash of boroglyceride; avoid over crowding.

Diet.—Generous in the extreme.

Orchitis. Inflammation of testes, acute and chronic, aching pain in testes and cord, fever, nausea, vomiting in the acute form. If chronic, there is hardness, swelling and tenderness.
(*Acute or Chronic*.)

Remedies.—Aconite, passiflora incarnata and pulsatilla seldom fail to afford immediate relief; belladonna, gelsemium, hot fomentations, lotions of boroglyceride. If fever abates use glycerite of ozone and saxifraga.

In the chronic form, saxifraga; and chloride of ammonia, use locally. Use suspensory bandage in all cases.

Ear-ache is usually the result of a poverty of
Otalgia. nerve force, brought into activity by cold, gout, rheumatism, mercury or some blood poison. It must always be looked upon as of great debility.

Locally, dry heat, mullein oil, aconite, belladonna, ether, concentrated ozone; internally, same remedies, with quinine, nux, kephaline, avena sativa, coca, nitro glycerine, antipyrin.

A muco-purulent discharge, often very fetid,
Otorrhea. containing the germs of bacteria and oidium albicans. There is an ulceration of tissue.

General Measures.—Wash out the ear with a tepid solution of boroglyceride, with a very fine syringe, then drop in mullein oil. Improve the general health by every possible means, by diet, bathing, clothing—push alteratives and tonics, nitric acid in comp. tincture of cinchona, saxifraga.

Inflammation of the inner ear is often due to cold,
Otitis. damp, gout, rheumatism; and to the metastasis of skin disease germs, as in measles and scarlatina.

Dry heat to the ear and side of face; free action of skin and bowels, a solution of aconite, belladonna and opium in the ear. Every effort must be made to obtain resolution, because if that is not obtained the case will run into otorrhea.

Usually caused by some uterine irritation, as
Ovaritis. abortions, absorption of lochial products.

It is met with acute and chronic. Deep-seated pain over the region of the ovary, aggravated by pressure, numbness in the limbs, extending down the thigh, sharp, darting; stinging pains in the ovary.

Our best remedies are rest, recumbent posture, local stimulation over affected ovaries; try first a combination of aconite, belladonna and gelsemium, with pure cocaine suppositories in both vagina and rectum—if these do not afford good result, bromide and iodide potass in fluid extract sumbul. Run it into a chronic form, then administer fluid extract of salix nigra. General course of tonics and alteratives. Pulsatilla in alternation with passiflora is of great efficacy.

Chronic nasal catarrh is called ozæna, when in
Ozæna. addition to the amœba there are the streptococci of caries and necrosis, penetrating to the cartilage of the nose, and where there is a strong, pungent putrefactive odor present.

Precisely the same treatment as for chronic nasal catarrh—daily douching with solutions of boroglyceride, or resorcin, or creolin.

Constitutional treatment with saxifraga, phylotacca, avena, coca, with a most generous diet.

Palpitation. Pulsations increased in force, and frequency—but irregular, intermittent; flickering; with great difficulty of breathing; purring tremor in jugular vein.

Prone to arise, directly from weak heart, or one affected by chronic disease; reflexly from dyspepsia, liver disease, hysteria, anæmia; loss of blood; venereal excesses, intestinal irritation, fright, masturbation.

If possible remove the cause. Regulate heart's action with either digitalis or strophanthus, or sparteine, or lily of the valley, or adonin, or creatine, or passiflora, or cactus grand.

Pancreas. This is a conglomerate gland lying transversely across the posterior wall of the abdomen. Its secretion is conveyed by its duct to the duodenum, for the purpose of emulsifying or saponifying the fatty portion of the food.

The diseases to which this gland is a victim are few and very difficult of diagnosis by any very marked symptoms. A heavily-coated brown tongue, with dyspepsia and the presence of fat or oil globules in the stools are sufficiently obvious.

The most common form of disease is a deposit of cancer germs in the head of the gland, which frequently induces jaundice by obstructing the common biliary duct near its opening, but an accurate diagnosis is very difficult, but fortunately is of little importance, as it cannot lead to efficient treatment.

Such remedies as phosphate of soda, salicylate soda, blue flag, fringe tree, colicin, alteratives. Ethereal preparations have an action upon it, as during their use fat disappears from the stools, where it previously appeared in large quantities.

Paralysis. Palsy, loss of motion and sensation, one or other or both—general or local.

The causes of all cases of paralysis are either congestion or anæmia.

Paralysis of motion and sensation of the entire body is virtually death.

Paralysis of one-half of the body (hemiplegia) from the crown of the head down is either due to effusion on the base of the brain or a patch of white softening.

Paralysis of one-half of the body below some point in the dorsal or lumbar portion of the spinal cord (paraplegia) due to either congestion or some anæmic state.

Local paralysis, due to same causes and also the action of poisons, as lead, mercury, or the ptomaines of disease germs, must in all cases be duly appreciated and treated on general principles.

All cases due to congestion must be treated with cupping, active secretions, iodide potass, alteratives.

All cases due to anæmia, with cinchona, coca, avena, kepheline, electricity, massage.

While local paralysis, due to the action of lead, mercury and other poisons, iodide of potassium internally, sulphuret potassium baths.

Paralysis, due to ptomaines of diphtheria or rheumatism, peroxide of hydrogen, special remedies for the original germ, as resorcin.

Paralysis due to the presence of cadaveric alkaloids is a subject which will engage the attention of the profession in the near future.

Constriction of the foreskin behind glans penis, great swelling, danger of gangrene.
Paraphimosis. Try the same measure as laid down for phimosis; those failing, try compression of glans penis with ribbon and pull the foreskin over. All failing, constriction to be released with four or five incisions on superior aspect.

Inflammation of the pericardium, due to
Pericarditis. the amylobacta irritating the pericardium.

Diagnosis rests upon the presence of rheumatism and gout; by the sharp catching pain over the heart, friction, sound, synchronous with heart beat until effusion takes place, when there is an increased area of dullness and sounds of the heart muffled; generally associated with rheumatism and gout; uneasiness and pain about the region of the heart, with chills, fever, palpitation, irregular pulse, cough, attacks of fainting, œdema of extremities and puffing of the face.

Administer same remedies as for rheumatism (which see), with large doses of passiflora in stimulants over region of heart and Dover's powder should be administered in sufficient doses to relieve pain.

In all forms of heart affections, tobacco, sexual congress and stimulants must be avoided; strict rest of mind and body; no running, jumping or climbing. Place irritating plaster over the heart, and occasionally con. ozone.

Irritation, inflammation of the covering of
Periostitis. bone is easily recognized by the deep-seated, sharp lancinating pain; the pain is most intense over bones with pink marrow, as in the fingers constituting whitlow or felon; over the ends of the long bones.

The microbe present here is analogous to the disease germ of pleurisy or peritonitis (which see).

Unless the microbe is either sterilized or killed it forms nodes (nests) on the surface of the bone, or it strips the bones of its periosteum and it withers and dies.

In all cases of periostitis an effort should be made to sterilize or kill the germ. Various germicides are effective, such as pad-

ding the germ-smitten part with either the oil or tincture of lobelia or veratum, or ozonized iodine, peroxide of hydrogen, citrine ointment—if a liquid, it should be kept constantly wet.

FOR AN ENLARGED DESCRIPTION OF THIS MICROBE SEE THE LARGE WORK ON BACTERIOLOGY.

Peritonitis.

(*The Streptococcus.*)

In all inflammations of serous membranes there is a streptococcus evolved of the most deadly character, most active and malignant in puerperal peritonitis. True, the septic character of the germ is modified by various pathological conditions.

A fractured rib, an intra abdominal wound, a piece of mesentery excised, a spot injured, or disease of the serous tissue favors the evolution of the germ.

Narcotism of the higher cerebral areas, with opium or its alkaloid, deprives the microbe of its pabulum and renders the tissue impregnable to the toxic action of its ptomaines, together with the local application of ozonized turpentine over the entire abdomen; if not that, then peroxide of hydrogen and glycerine most effectually sterilizes the streptococcus.

The rapid excretion of the most deadly ptomaines by the germ forbids delay. Human life is too sacred to permit of experiment with such hap-hazard drugs as exalgine, or antifebrine.

The injection of the blood of a patient afflicted with peritonitis into any mammalia gives rise to fatal peritonitis.

Opium, alternated with *passiflora incarnata*; locally over the abdomen, ozonized turpentine.

FOR AN ELABORATE DESCRIPTION, WITH ILLUSTRATIONS OF THIS MICROBE AND OTHER POINTS IN TREATMENT, LARGE BOOK ON BACTERIOLOGY.

Inflammation of the veins, common among washerwomen washing clothes of syphilitic patients, or from cloths or discharge of parturient patients coming in contact with the skin through some scratch or abrasion. There is great pain along the course of the veins, which become thick, cordy, excruciatingly painful; rigors; fever of an irritative or nervous type.

Blunt impressibility of nervous system with conium pill. If vein is thick, cordy, thrombosis has taken place. Apply leeches, closely, so as to drain off the coagulated, germ-smitten blood; then paint with creosote freely, or apply peroxide of hydrogen and subsequently, keep applied linseed meal; poultices made of glycerine, wild indigo, carbolic acid, charcoal and capsicum; change every three hours; yeast, ozone water and other germicide remedies internally, with nourishment and tonics.

Constriction of the prepuce anterior to the
Phimosis. glans penis, often congenital later in life, due to irritation such as the natural cheesy or sebaceous secretion, the germs of gonorrhea, masturbation. Try first continuous application of hot water, with lobelia or belladonna or both, lotions of gelsemium.

Inject belladonna under foreskin, try all means possible. All failing and danger of gangrene, slit it up, that is, perform circumcision.

A morbid increase in the plasma of the blood.
Plethora. Due to inertia, excess in eating and drinking, especially malt liquors.

Restrict the amount of saccharine and amylaceous articles of diet; diminish the amount of fluids; daily alkaline baths with massage; bowels to be kept freely opened with salines. Try *fucus vesiculosus*.

Inflammation of the internal lining
Pleurisy. membrane—the serous covering of the chest—is generally caused by mechanical violence or cold, damp, wet, exposure.
(Acute and Chronic Streptococcus.)

It is easily recognized by the depression, fever, cough; by the sharp, lancinating pain or catches over a circumscribed area; by the roughened or friction sound at the same point. The streptococcus can usually be detected in the sputum.

Microbial evolution cannot take place if the action of the heart is maintained at 65 by the administration of *veratrum viride* and *comp. syr. tolu.*

Perfect destruction of the germ takes place when ozonized turpentine is applied over the microbial nests in the pleura.

The predisposing causes are great nerve depression; the exciting cause exposure to inclement weather; often aided by contagion and infection.

It is easily recognized by the great lassitude, languor, debility; by the extreme difficulty of breathing; cough; expectoration, in the early stage by the germ-laden sputum resembling prune juice; the flush on cheek, dullness on percussion on base of the right lung, with bronchial respiration, rigors, fever.

Microscopical Diagnosis.—A microscopic examination of the patient's sputum should be made at once. Before this is effected the oral cavity should be disinfected, then the sputum examined.

The *Pneumococcus* consists of short, thick, rods, almost elliptical cells; often two or four linked together, forming dark granular colonies.

The lanceolate diplococcus is diagnostic of the pathogenic microbe of pneumonia.

During the period of shock, that is a few days prior to the rigor and even during a few days of fever, the pneumococcus is the only microbe present in the prune juice sputum, but later on either the amœba, subtilis, staphylococcus aureus et albus and different varieties of pus-microbe are to be found. The lanceolate coccus is persistently present and in large quantities in the sputa of all cases. Still, in view of the fact that some microbes bear a strong resemblance to the pneumococcus, the differential diagnosis should be settled by a plate preparation and cultivation, in addition to the microscopical examination. The diplococcus loses its virulence and vitality with characteristic rapidity, both in the patient's system and on artificial nutritive media. In the former case it becomes less and less virulent day by day, to perish altogether just after the crisis. In artificial media kept at 37° C. the microbe loses its vitality in a week; in that at 40° or 40.50° C., even in a few days. However, when the medium is daily renewed, and invariably kept at 32° C., the coccus may survive about three weeks. In lower animals, on inoculation of its pure cultures obtained from the sputa or pulmonary juice (in cases ending fatally before the crisis), the diplococcus gives rise to a typical fibrinous pneumonia.

The microbe is pathogenic of pneumonia; grows vigorously in blood serum or beef juice. Cultures injected into any animal will give rise to the disease. The microbe is most abundant in the prune juice sputum, from which it is easily isolated.

As the pneumococcus in their evolution, growth, spore formation excrete the most deadly ptomaines—the alkaloid being productive of embolism, cardiac and intestinal paralysis, there is great danger in all cases.

The essential indications of all sound treatment are: keep up vital force; either sterilize or annihilate by the most powerful bactericides the microbe.

Prognosis.—May be *favorable* if actively treated, and if confined to one lobe and the patient not too old; *unfavorable* at the extremes of life, or if complicated with other diseases. *Cause* of death, failure of heart's action, heart clot, asphyxia, asthma, gangrene.

Sufficient doses of veratrum viride (Norwood's tincture) to keep pulse at 60. Warburg's tincture or else sulphate of quinine—some preparation of opium to control irritability. Comp. syr. of tolu for cough and germ destruction.

To the microbial smitten lung, dry cups, followed with either concentrated ozone and chloroform, or ozonized turpentine, then with hot poultices of linseed meal and resorcin, or peroxide of hydrogen or creolin.

Other remedies of real value, liquor ammonia acetatis, jaborandi, if administered before microbes form a colony in lung. No good later. For inhalation, ethyl iodide, liquid ozone.

FOR A THOROUGH, DETAILED DESCRIPTION OF THE PNEUMOCOCCUS (THE MICROBE OF PNEUMONIA), ITS PTOMAINE MAGNIFICENTLY ILLUSTRATED WITH ORIGINAL DESIGNS OF ALL GRADES OF THE GERM, WITH NEWER REMEDIES FOR ITS CURE, SEE PAGE 602 OF THE LARGE WORK ON BACTERIOLOGY.

Due to a special hybrid germ, predisposing
Polypus. cause. Irritation an exciting cause. There are
 (*Nasal.*) several varieties—*mucous, slate colored, red gelatinous*; pale and red, fibrous and malignant.

Treatment by alteratives and tonics of great utility. If within reach inject them with hypodermic syringe with C. P. peroxide of hydrogen, or chlorozone, and they will wither and die. If injection cannot be effected, then a snuff of blood root, bayberry and sulphate of zinc should be tried, or if ozonized, jequirity can be applied they will exfoliate. If not, then either torsion, ligation or excision must be resorted to. In all cases glycerite of ozone, kephaline, avena sativa, should be persevered with internally, in order to prevent their return.

Prolapsus Ani,
 (*Falling of the rectum.*)

Protrusion of either the mucous or muscular coat of the bowel is due to debility; and produced by straining at stool, due to constipation, or the tenesmus of dysentery; irritation of ascarides, piles, or enlarged prostate.

In all cases, the bowel should be immediately returned, if possible; for if not returned it becomes swollen, greatly tumefied, and covered with an epidermis.

If unable to return it the sphincter should be placed under the influence of belladonna in the form of a cerate, and if it does not act speedily cocaine also could be used; once returned, it should be kept in position by a pad or compress and a T bandage.

Then the contents of the bowel should be rendered soft by the internal use of the fluid extract of juglandis, and injections of some astringent, as either decoctions of the witch hazel or oak bark, or hydrastis, or perchloride of iron, or the following rectal tonic: Take one ounce of aromatic sulphuric acid, one drachm of sulphate of quinine, dissolve the quinine in the acid, then add sixteen ounces of water. Inject three teaspoonfuls twice daily.

If after a proper course of treatment with these and like remedies, all fail, the contents of the bowel should be removed

with castor oil, after which an anal speculum should be inserted and through its window seven vertical streaks made at equable distances by fuming nitric acid, bowels locked up for a week with opium. If perfectly performed this usually effects a radical cure.

Prostatic Hypertrophy. Enlargement of the prostate. Common in old age, frequent and difficult micturition; gland can be felt as a large tumor in anterior wall of the rectum; gives rise to a thickening induration, contraction, inflammation of the coats of the bladder, decomposition of the urine, ammoniacal toxæmia.

Iodide potass; mineral acids; iris, cleavers, saxifraga, uva ursi; cocaine suppositories most efficient; aristol suppositories essentially curative; general alteratives and tonics, urethral bougies.

Prostatitis. Due to irritation, as sexual excesses, introduction of bougies, metastasis of rheumatism or gout gives rise to fever, heavy pulsative or burning pain in the perineum, increased at defecation, tenderness to touch within rectum, irritable bladder.

Insist upon rest in bed, recumbent posture, aconite, belladonna, gelsemium; cocaine suppository; warm hip-baths, hot fomentations; open bowels with salines, administer uric acid solvent, saw palmetto, passiflora, pulsatilla.

Prostatitis. Same causes as the acute, also due to masturbation, sexual perversion, withdrawal, or sexual incompatibility.

(*Chronic.*) Treatment with general alteratives and tonics, sexual sedatives, gelsemium, cocaine suppositories, salix nigra and passiflora incarnata, hip baths, nutritious diet.

Pruritus. This may occur in various parts of the body, and belongs to a class of nervous affections, the outcome of a poverty of nerve.

Intolerable itching, burning, smarting, with desire to scratch, aggravated by heat; often associated with pregnancy and change of life, apt to terminate in cancer; nothing is visible to the eye, being a neurosis local; in other cases, prurigo and eczema are present.

Treat as general neurasthenia, by coca and kephaline; afford relief by doses of chloral hydrate; try first a strong lotion of boroglyceride, then hamamelis; these failing, use rose water Oss.; borax, half ounce; alcohol, two ounces; camphor, one drachm. Mix. Thymol jelly most effective, sulphate soda, general alterative course, saxifraga.

An effusion of blood either into the follicles of
Purpura. the skin or its general structure.

The cause is a poverty of nerve force, lack of cohesion of the nerve cells, owing to which the walls of blood vessels, and even the corpuscles themselves rupture, and an effusion of blood takes place into the follicles, forming red dots (acute) and a general effusion, purple patches, like ecchymosis, constituting black leg chronic, anæmic symptoms and hemorrhages.

Its treatment consists in rest in bed, pure air, sunlight, the most nutritious diet; mineral acids and cinchona, coca, avena, ozone water; kephaline.

Puerperal Fever. Puerperal or childbed fever may exist alone without acute metro-peritonitis, due to infection or contagion, from a physician or nurse, who has either been in attendance upon such cases six months previously, or upon some case of metro-peritonitis, erysipelas, or to auto-infection from placental debris or clots in the uterus.

Its diagnosis is based chiefly upon the history of the case, a parturient patient, either a miscarriage or full period; most commonly makes its appearance within nine days after confinement, beginning with languor, lassitude, debility, arrested secretion of milk and lochia; violent rigors, followed by intense fever, which is apt to terminate in death within seven days. A microscopical examination of the blood, scrapings of the tongue, breath, urine exhibits the cocci in zooglœa, or in chains—breeding by spore formation—a great ptomaine excretor of a potent toxical kind, which gives a remarkable fatality to the fever.

In all organs of the body after death the microbe can be found in great abundance, brains, heart, lungs, spleen, kidneys, blood and cavity of the uterus.

The microbe has a strong affinity for all animal matter, such as the hair of physicians or nurses, feathers in beds, the wool of carpets, so that very many months (six at least) may elapse before they are wiped out, unless submitted to the vapor of burning sulphur.

The microbe bears cultivation well, and is pathogenic of the fever.

The best, most powerful and energetic general treatment for a most malignant and fatal fever should be adopted. Sponging body thrice daily with germicides; opening the bowels; surrounding patient with ozone atmosphere; keeping action of the heart controlled by veratrum. Then the physician will select a microbicide, which is to be administered internally, from some of the following: Peroxide of hydrogen, resorcin, sulphide of lime, carbolic acid and tincture of iodine, passiflora incarnata; intra-

uterine injections at least thrice daily, of either the boroglyceride or creolin, or chlorinated soda or peroxide of hydrogen; over the entire abdomen, either ozonized turpentine or concentrated ozone, followed by resorcin or thymol jelly, or creolin. Vaginal pastilles of aristol are remarkably efficacious.

FOR A MORE EXTENDED DESCRIPTION, WITH VERY BRILLIANT ILLUSTRATIONS OF THE GERM AND ITS MODE OF SPORULATION AND EXCRETING PTOMAINES, ITS CORRECT TREATMENT WITH NEWER REMEDIES (BACTERICIDES) SEE THE LARGE WORK ON BACTERIOLOGY.

Relapsing Fever. This fever may be defined to be one in which the chief characteristic is its remarkable recurrent paroxysmal intensity, (*The Spirillum.*)

First rigor, followed with fever comparatively mild; in seven days another more severe; the third a more violent still, etc. It has all the type of remittent malaria.

The cause is a combined microbe from both animal and vegetable matter, acting upon the primary bioplasm of the blood.

The fever is easily recognized by its peculiar remittent type, which lasts seven days; which recurs again and again till the sixth or seventh week, when the patient succumbs.

A microscopic diagnosis of the breath, saliva, scraping of the tongue, blood, urine, reveals this germ, which consists of threads, with screw-curves. They move rapidly, and exhibit peculiar wave-like undulations.

They are found in the blood most abundant during the relapses, and they keep accumulating, so that by the fifth or sixth week they are excessive. Their prodigious ptomaine excretion is the cause of those terrible prostrating sweats.

The microbe is pathogenic of the fever, bears cultivation well in blood serum, or broth highly salted. Cultures to be successful must be inoculated into animals near to man in the scale of being. In the lower grade of quadrupeds we obtain negative results.

The microbe is either sterilized or killed by the exhibition of either the concentrated tincture of kurchicine or Warburg's tincture. Same treatment as typhoid.

The complications to be guarded against are: meningitis, pneumonia, bronchitis, breaking-down of the blood, failure of the heart.

SEE ILLUSTRATION AND NEWER REMEDIES AS LAID DOWN IN THE LARGE WORK ON "BACTERIOLOGY."

Retention of Urine.*(Micrococcus Urea.)*

This microbe appears in the bladder, in all cases of retention of urine, from whatever cause, paralysis of the bladder, enlarged prostate, stricture, or when urine is permitted to stand exposed in a warm place; the transformation of urea, the nitrogenized principle, into ammonia and carbonic acid. This micro-organism is evolved and appears in the form of free globules, of articulated filaments, or chaplets, innumerable cocci.

The microbe is the cause of ammoniacal urine, and is pathogenic of retention of urine, bears cultivation well in an ammoniacal fluid. Its injection into animal gives rise to the disease. It can also be carried by bougies, sounds, catheters, clothing.

Once the retention of urine is overcome, the microbe is easily sterilized by injecting the bladder with boroglyceride or by the introduction of papoid or thallin, or other bactericide bougies into the bladder, permitting them to dissolve.

FOR A DETAILED DESCRIPTION OF THE MICROCOCCUS UREA AND THE IMPORTANT PART IT PLAYS IN THE ANIMAL ECONOMY, WITH ILLUSTRATIONS AND TREATMENT WITH NEWER REMEDIES, SEE PAGE 348 OF THE LARGE WORK ON "BACTERIOLOGY."

Rheumatism.*(Bacillus Amylobacta.)*

Under states of great and persistent, cerebral depression, the bacillus of butyric acid, the microbe of rheumatism, is evolved from the fermentation of the starchy and saccharine elements of the food in the process of mal-digestion.

The recognition of this condition is easy, profound nerve depression, an acid diathesis, with the bacillus amylobacta irritating some or all of the white fibrous tissues of the body, the membranes of the brain, pleura, peritoneum, periosteum of bone, and the synovial membrane of joints, with urine literally loaded with uric acid crystals. The bacillus amylobacta can be detected in the breath, mouth, in the sweat, feces, urine, and blood.

The microbial diagnosis is complete, when there is visible in the field of the microscope, minute cylindrical rods, rounded at their extremities, usually straight, and either isolated or united in chains of two or more articulations. They have a gliding motion and are often curved, and present slight undulation, they are seen reproducing themselves by fusion, and like all other disease germs excrete ptomaines freely. The germs are found most abundantly in cheese, they convert the lactic acid in milk into butyric acid.

The bacillus amylobacta, the microbe, the evolution of fermentation, is pathogenic of rheumatism, bears cultivation well

in any starchy or saccharine fluid; cultures injected into animals produce the identical condition which we meet with in the human being. The microbe is anaerobic, found in the ripening of cheese, in the fermentation of sauer-kraut, and sour gherkins; in a case of acute rheumatism, the micro-organisms can be detected in the atmosphere for at least twenty-five feet from the ferment. Ptomaines are excreted freely, which are the cause of the excruciating pain.

The indications of treatment are: Raise by every possible means the standard of vital force so as to prevent fermentation and germ evolution. Sterilize and completely annihilate the microbe. To effect this try some decided cerebral stimulant as either cimicifuga, or sulphate of quinine, or avena, or kephaline.

To kill the germ select either salicylic acid in a solution of acetate of ammonia, or salol, or manaca, or glycerite of winter-green ozonized, or probably better still, the uric acid solvent, the salts of strontium.

Rigidly prohibit all farinaceous and saccharine articles of diet, together with malt liquors of every description.

FOR AN ELABORATE ARTICLE ON THE ETIOLOGY OF THE BACILLUS AMYLOBACTA, ITS LIFE HISTORY, BEST MEANS OF COMPLETE OBLITERATION, CURE WITH NEWER REMEDIES, SEE PAGE 906, OF THE LARGE WORK ON "BACTERIOLOGY."

During the last few years the etiology of
Scarlatina. scarlet fever has been the subject of much discussion and all have now settled down to the
 (*Micrococcus.*) fact that it is a micro-organism, and the susceptibility to its presence in children is greatest up to the fifth year of age, when the liability diminishes year by year.

The diagnosis of this fever is simple, accurate observation should prevent mistakes: a period of incubation of from four to eight days, in which the germ sprouts; two days of fever, in which there is active evolution with ptomaine excretion; three days of rash in which the microbe seeks the cutaneous surface for free oxygen and localizes itself in nests which give rise to a peeling or shedding of the cuticle; in this peeling or desquamation, the germ is alive but dormant, awaiting fresh pasture fields.

According to the status of vital force of the child, the number of micrococci, the type of fever will be one or other of three things, either *simple*; *anginosa*; *malignant*; very mild, active, or, decidedly fatal the deficiency of vital force, number of germs; excretion of ptomaines.

The tongue is red, has a strawberry appearance; the glands of the mouth and throat are germ laden; the breath full of them; the skin is terse, when eruption is out, smooth and velvety, face flushed.

In the saliva, breath, blood, the micrococcus can be detected by the microscope, as well as in the desquamating epidermis, if they are not smothered out. There is invariably albumen in the urine.

The micrococci are pathogenic of the disease, bear culture well in beef tea or any nutrient fluid.

The treatment of all cases, except the malignant, is simple and effective.

The little patient must be kept in bed, warm, and a mixture of tinctures of aconite, belladonna and digitalis added to water, should be administered every hour; entire surface bathed thrice daily with tepid water to which peroxide of hydrogen is added; mouth and throat gargled with one teaspoonful of ozone water added to four ounces of tepid water every three hours; application to throat a piece of linen dipped in glycerine diluted with warm water, cover over with oiled silk.

The atmosphere of the apartment must be kept thoroughly impregnated with some bactericide, such as the exposure of the oil of eucalyptus, or tincture of iodine, or bromine, or menthol. Then the attending physician should select some effective germicide to sterilize, kill the germ and neutralize its ptomaine, such as the ozonized glycerite of sulphur; sulphide of lime, sulphur water; peroxide of hydrogen; resorcin.

FOR A MORE ELABORATE DESCRIPTION OF THIS MICROCOCCUS, NEWER METHODS OF TREATMENT, SEE THE LARGER WORK ON BACTERIOLOGY.

An abnormal condition of the blood in which its **Scurvy.** alkaline constituents are deficient.

Generally caused by a sameness of diet, mode of life and want of vegetables and fruit.

Its diagnosis is the history of the case, debility, hemorrhages from nose and mouth, also extravasation into the skin, albumen in the urine; spongy or ulcerated state of gum, the teeth drop out, breath has a peculiar fetor; skin livid or purple in spots. Serous effusion into the brain, chest, abdomen and cellular effusion.

Our best remedies are rest in the recumbent posture, daily alkaline sponging, flannel clothing, pure air, sunlight if possible, push chlorate potassa in five-grain doses; mineral acids and cinchona, ozone water, coca wine, avena, kephaline, etc., etc. Abundance of ripe fruit and vegetables, juice of meat, eggs, game, acidulated drinks to excite the alkaline secretions.

Motion sickness. Keep the face to the

Sea-Sickness. bow of vessel, so that the semi-lunar canals are in line. Keep bandage over the abdomen. Ozonized sumbul, cocaine one-tenth of grain every three hours. Kola nut wine very effective.

Skin Diseases,
(*First Stage Erythema.*)

In a cursory glance at cutaneous diseases the best method of diagnosis is to take them as so many effects of inflammation dependent upon either microbes in the blood or skin.

Erythema, or redness, is a rash in the form of red, irregular patches, generally diffused, or nearly continuous; although generally due to mal-assimilation and bacteria, it is not contagious; in some cases there is great prostration, rigors, fever, the rash (bacteria) appearing on any part of the body and giving rise to a sense of burning, tingling, and in bad cases pain.

Roseola.—Scarlet rash; a rose colored efflorescence, occurring in various forms. Usually begins on the face or extremities in the form of red pimples or points, which spread and form rings, which may or may not coalesce. Itching, tingling, often fever. Dependent upon mal-assimilation (bacteria).

Urticaria, or Nettle Rash, hard, rounded, or oval elevations of the skin, sometimes pale, in other cases red; non-contagious; with or without fever. Due to the bacteria present in mal-nutrition, associated with nerve disorder, or catamenial irregularity. Usually there is itching, tingling, burning; wheals often vanishing from one part and reappearing elsewhere; sometimes chronic.

General Measures.—Emetic, warm alkaline bath daily; open bowels with salines; aconite and belladonna for fever, glycerite ozone; nitric acid in cinchona. Lotions warm, bicarbonate potass to eruption, covered with oiled silk, or lime water, diluted.

Diet.—Plain, nourishing, avoidance of salt meat and shellfish.

Herpes, or Tetter, is a general term

Skin Diseases. applied to vesicular eruptions on the skin
(*Vesicles, Bles.*) with burning pain, itching, tingling, followed by scabs; and finally red spots, with or without fever, lasting weeks or months or years, all forms being extremely contagious, as the bacteria and other germs are let loose in the serum or effusion.

Herpes Labialis is a form that occurs on the lips, mouth, fauces, tongue; it is usually associated with cold, mal-nutrition, disease germs in blood. There are found in those vesicles, bacteria; oidium albicans; germs of syphilis and the bacilli tubercle.

Herpes Preputialis, when it occurs on the prepuce, or on head of penis, small vesicles, isolated or in clusters. Dependent on a perversion of sexual congress, pre-eminent contagious and infectious.

Remedies.—Saxifraga, phytolacca, belladonna, glycerite ozone. In tetter of the prepuce, as fast as a vesicle appears puncture it with a fine needle, then press a sponge on it saturated

with a strong solution of permanganate potassa ; then keep lotions of lime water or boroglyceride applied all the time.

General Measures.—In all forms of tetter keep applied lotions of antiseptics. Boroglyceride is one of the most elegant.

Herpes Zoster, or Shingles, clusters of vesicles in an irregular band, or patches on hands and body.

Eczema.—Oxide of bismuth, 4 parts; oleic acid, 3 parts; white wax, 12 parts; vaseline, 36 parts; otto of roses, 1 drop. Aristol dusted on.

Pemphigus.—When nerve force is terribly shattered ; when the brain has lost its cohesion ; blood literally eaten up by disease germs, especially those of syphilis, rabies, bacilli of tubercle etc., we meet with an eruption of large blebs or blisters, ranging in size from a small marble to that of an egg. These blebs or blisters contain a yellowish fluid in which millions of bacteria and other disease germs literally swarm.

In acute pemphigus, fever, great prostration, there is much redness prior to and after the effusion has taken place in and around the blebs.

In the chronic form, there is no fever, but the eruption is preceded by a sense of pricking and smarting. Both forms dry up and terminate in

Rupia.—Flat distinct bullæ, containing serous, purulent or dark sanious fluid followed by thick scabs or ulcers, appear often on the lower extremities, loins or nates and other parts of the body.

Rupia is the same size as the pemphigus which preceded it, where blood is badly damaged, loaded with disease germs, in some of the bullæ, they eat, burrow deep, give rise to very fetid discharge, with pain, sleeplessness.

Treat same as for syphilis, antiseptic lotions of boroglyceride, lime water, tinc. iodine. Greasy, oleaginous remedies not admissible.

Sudamina.—Numerous minute vesicles of millet-seed size ; at first transparent, afterwards slightly opaque, almost, or always symptomatic ; an attendant on many forms of fever, phthisis.

This miliary eruption is evidence of greatly depreciated nerve force, and generally associated with night sweats, and disappears on the administration of quinine, aromatic sulphuric acid, nuxvomica, glycerite ozone.

Skin Diseases.

(*Effusion of Lymph.*)

Ecthyma.—Eruption of pustules ; situated on elevated, hard, inflamed bases, usually distinct ; non-contagious, and without fever. Many varieties.

Impetigo.—Pustules, not prominent, breaking, and discharging an excoriating ichor, then thin scabs attended with great heat ; itching, smarting. Due to dentition ; menstrual disorders ; constitutional derangement, local irritation, as in dyeing.

Impetigo Figurata, Moist Tetter. — Minute yellow pustules; closely crowded upon an inflamed red skin, then ichorous discharge; greenish yellow or translucent scabs.

General Measures.—Resort to same general treatment as for other skin diseases. Saxifraga and phytolacca; locally keep lint or several layers of Canton flannel saturated with boroglyceride lotion, covered over with oiled silk, change thrice daily.

Skin Diseases.

Papulæ, or Pimples.

Strophulus.—Red or white gum, according to color. Minute florid pimples, dispersed; sometimes with red patches; over ex-

posed surface, or the whole body; occasionally with a few vesicles. A disease of infants; often due to irritating clothing, filth or gastric irritation.

Lichen.—An extensive eruption of pimples, in children or adults, with or without internal disorder; followed by desquamation.

Lichen Simplex.—Prickly heat, small red pimples, on face, forearm, or whole body; with head tingling and itching; usually preceded by fever, duration, one or two weeks, or chronic. Alkaline baths.

Lichen Agrius.—Begins with fever, subsiding with eruption, numerous red pimples, in large patches, with efflorescence; often a few vesicles. Itching, burning and smarting, followed by excoriation, scabs, then dry scales; skin often fissured, duration two weeks or more.

Urticatus.—Combined with urticaria. Other varieties. Usually, due to heat, or disordered digestion. May follow fever. D. scarlatina, rubeola, strophulus, prurigo, erythema, urticaria; sometimes from eczema, impetigo, psoriasis, herpes, syphilitic eruptions.

Prurigo.—Papulæ of the color of the skin, with excessive itching, usually chronic and without fever. Eruption in one or many spots, usually on the neck, back, or outer side of the limbs; the violent scratching followed by small black scabs of concremented bloody matter, itching, creeping, pricking; in old cases, eruption mingled with vesicles enlarged, hardened and with pustules; peculiarly inveterate and troublesome. Due to gastro-intestinal disorder; deteriorated health, uncleanness. Many varieties.

General Remedies.—In all cases attention to stomach and bowels; rectify any condition of indigestion or mal-assimilation. Inculcate a general tonic and alterative. Give saxifraga and phytolacca comp., cinchona, ozone water, glycerite of ozone, avena sativa.

Diet.—Rich in blood elements, daily alkaline and bran baths.

Acne.—Chronic eruption of scattered pustules, with inflamed hardened base, terminating often in tubercles, and probably seated in the sebaceous follicles, occurring on the face, shoulders,

chest, or about the nose and on the cheeks. Most frequent between the ages of fifteen and thirty years, and probably always or more frequently due to onanism, or masturbation, usually obstinate. Many varieties.

Remedies. — Saxifraga, phytolacca, glycerite of ozone. Face washes of lime water and iodide of potash, hydrag. bichlorate, sulphur.

Rosacea. — Yellow pustules on a deep red base, the former often giving place to tubercles. Most common on the nose; then on the cheeks and forehead, occurring from intemperate eating or drinking. Digestive disorders on or about the cessation of the menses often give rise to it.

Remedies. — Stimulate liver. Nux, saxifraga, sulphur, or phytolacca. Apply ozone ointment, or an ointment of sulphur, or sulphur boiled with lime, iodide potass and chloride of ammonia to the nose.

These affections consist of both disease
Skin Diseases. germs, animal and vegetable, and para-
 (*Parasitic.*) sites, pretty much embraced under the
 head of *Tinea*.

Tinea Capitis. — After thoroughly cleansing the head and removing all the incrustations possible, the daily application of the following speedily destroys the vegetable growth: Salicylic acid, grs. xxx; tinct. benzoate, gtt. xxx; ozone ointment, one ounce. Mix.

Tinea Tonsurans. — The parasite here is the trichophyton tonsurans, when located on the head gives rise to tinea capitis, or crusta tactea, or scald head of infants, when on the body ringworm, vesicles in circular patches, followed by minute scales; successive crops; usually on the face, neck or arms.

Tinea Favosa, common form; scabs quite regular, cup-shaped so as to resemble honeycomb. May remain for years. Disintegrating at their surface and falling off in white powder, offensive odor.

Tinea Decalvans, a cryptogamic growth arising from the hair follicles.

Tinea Versicolor, Liver Spot, a cryptogamic growth in the pigmentary gland.

Tinea Sycosis, due to a cryptogamic growth of fungus, extremely contagious, like all the preceding parasite affections. Small pustules, scattered or closely crowded, seated in the sebaceous and hair follicles, each pustule usually penetrated by a hair; often on the chin or upper lip; the pustules followed by brownish scabs.

Remedies. — In all the parasite diseases of the skin, remove incrustation of parasites by linseed meal poultices; then apply germicides, as ozone ointment, iodide of sulphur ointment, thymol ointment, lotions of boroglyceride, salicylate soda.

Improve general health by alteratives and tonics, saxifraga, cinchona, mineral acids, country air, daily bathing. Keep eruption rigidly excluded from air and light.

Scabies.—Itch, pimples, vesicles and pustules, singly or intermixed; between the fingers, or on the wrists, or in other parts, with intolerable itching. Contagious; first, itching; the part examined showing a minute vesicle; these usually separate; scratching leaves scabs and dark crusts, or pustules. Often intermixed with other forms of skin diseases.

Diagnosis.—Nothing reliable but the presence of the itch insect (*acarus scabies*) in the field of the microscope, where it can be seen with a low power, if it exists.

Remedies.—Rub over affected parts with an ointment of thymol or ozone ointment, or both, or with benzoin or bergamot. Another good formula: Naphtholi, 15 parts; saponis virid., 50 parts; adipis, 100 parts; pulv. cretæ alb., 10 parts. Mix. Anoint patient all over with this.

Psoriasis.—Slight elevations of reddened skin, covered by whitish scales; not depressed in the centre; originating in minute papules; the patches sometimes rough and chapped, attended with severe itching, burning and tingling, occurring on the face, more frequently on the body and limbs; sometimes on the hands; (grocer's itch); sometimes on the prepuce or scrotum. Severe forms preceded by fever, headache, etc.

General Measures.—Everything to be done to build up the nervous system and purify the blood; locally, bran bath and chrysothanic acid, as follows: Chrysarobin, 10 parts; salicylic acid, 10 parts; ether, 15 parts; flexible collodion, 100 parts. Paint over the affected part once or twice daily.

Leprosy; Leprosy, a disease beginning with minute solid eminences; followed by scaly patches; with depressed centre, the scales fall and are renewed, enlarging on the border. Duration indefinite. Many varieties.

Pityriasis, or dandruff, bran disease. Superficial inflammation of the skin with continued exfoliation of minute, bran-like scales, usually on the head, often extending to parts or whole of the body with itching, pricking, etc. May appear at first in dry, white scales, or in superficial redness followed by scales. Sometimes when the scales are removed ichor follows, then scabs on scalp, termed dandruff; in severe forms the ichorous discharge concretes with the hair, forming a thick crust over the head. On the eyebrows and face it is termed morphew.

Remedies.—Alteratives and tonics. Kephalline, avena sativa, coca, cinchona, mineral acids, kolatine.

Ichthyosis, fish-skin disease, a thickened, hardened, rough state of the cuticle, somewhat resembling horn; breaking into

irregular scale-like pieces; without inflammation. Most frequently congenital, and in these cases the skin, at birth, is of a thick, harsh and dirty color. No itching or pain; health often remarkably good.

Skin Diseases.
(*Tuberculæ.*)

Elephantiasis; (of the Greeks,) eruption of irregular tumors from the size of a pea to that of a walnut. Shining; dusky red, and afterwards bronze colored; very tender; usually on the face, which is then knotty, rugose, distended, enlarged and of livid hue. May extend to contiguous mucous membranes and organs of sense, causing partial or complete loss of the senses, of the voice.

Elephantiasis, (of the Arabians,) Barbadoes leg; chronic; indurated swelling of subcutaneous tissues with alteration of the skin, and enlargement and deformity of the limb. Beginning with acute inflammation of lymphatic vessels, and fever, then the skin sometimes smooth, sometimes fissured, with ulcers, etc., often with erysipelas. Sometimes subsides spontaneously.

Framboesia; Yaws; eruption of tuberculous excrescences resembling raspberries; most abundant in the face, axilla; groins and about the genitals. Contagious.

Skin Diseases.
(*Discoloration.*)

Freckles, patches of excessive development of pigmentum nigrum.

Bronze-hue. In large, irregular patches; due to continued use of nitrate of silver.

Ephelis; Patches of yellow, or brownish yellow discoloration, with bran-like exfoliation and slight itching.

The recent additions to our list of remedies for all cutaneous diseases are the ozone tablets, and peroxide of hydrogen. Both remedies are meeting with great success in those chronic, or so called incurable cases, as rupia, psoriasis, lepra, etc.

Sore Throat.

This may depend on cold, or some simple irritation, but most generally mercury, syphilis, tuberculosis, small-pox, the microbes of pneumonia and bronchitis, scarlet-fever, foul air or sewer gas. In all forms the breath is germ laden.

The case must be treated according to cause. Tonics and alteratives, gargles of chlorate of potassa and tannic acid; solutions of boroglyceride, or resorcin; hydrastis and borax. Every possible means to improve the general health, and insanitary surroundings.

Snake Bites.
(*The Micrococci.*)

The poison of snakes is usually ejected from the poison sacs of the viper. Ligate above and below the bite, free incisions, encourage bleeding, apply peroxide of hydrogen. The patient must drink pint after pint of good old

whiskey, till he is completely intoxicated. During the state of profound intoxication the germ, deprived of its pabulum through the state of *quasi*-suspension, *dies*. Recovery perfect.

Spasm of the Bladder. Irritable bladder, paralysis of the bladder. All due to debility, and the presence of the micrococci urea. Incontinence or continence, over-distension. Lobelia, musk root, cocaine suppository, avena, nux and belladonna. Sterilizing the urine by the internal use of boroglyceride.

Spermatorrhœa. The flowing away of semen without an effort, involuntary emissions, diurnal, usually nocturnal.

Great skill, experience and tact are often indispensable for a cure. Our best remedies are general alteratives and tonics, hip-baths, tincture of green root gelsemium, sufficient to act as anaphrodisiac; salix nigra ext. ozonized, a superb remedy; ergot, digitalis, belladonna, bromide potass, sumbul, urethral bougies of salix nigra; much irritation, passiflora and pulsatilla, cocaine and salix suppositories.

In addition general daily bathing of entire body, followed by friction or massage; shower baths are excellent; flannel clothing; bowels to be kept open; sleep on right side; foreskin to be drawn back over the glans penis, parts anointed with oil so as to remove the sebaceous secretion, then washed with soap and water; abundance of exercise in the open air never to fatigue; avoid female society and all attempts at coition till cured; history best reading; healthy amusements; avoid base ball, use of velocipedes and roller skating as highly prejudicial; change of scene invigorating. Every possible means known to science to be resorted to to build up vital force, as the disease is essentially one of great debility or neurasthenia.

Spirillum Plicatile. Within a distance of five miles from the emptying of a sewer into a lake or river, this microbe is found, and found in greater abundance the nearer to the mouth of the sewer. Besides being common in rivers into which sewage enters, they are abundant in marsh water, and can be obtained by allowing algæ to decompose in water.

As found it consists of thin threads with numerous narrow windings. The threads have primary and secondary windings, very irregular; when their ends are cut off bluntly, they exhibit rapid movement.

The presence of the spirillum plicatile in our bays, rivers, lakes gives rise to the bacillus phosphorescens in our fish, oysters, crabs, rendering them unfit for human food.

Progressive artificial cultivations will after half a dozen cul-

tures produce the microbe of typhoid fever. Lime, sulphur, and other bactericides completely annihilate it.

The lymph canals, the pink marrow of bones, the mesentery, the spleen and other analogous glands, exercise a most important function in the human economy, viz., the elevation of the white corpuscles of the blood to red. Besides aiding in this process, the spleen acts as a safety valve to the heart, an important adjunct to the liver.

Placed over its capsule are the principal ganglia of the great sympathetic, with its millions of little brains, drawing vitality from the centre of life—reservoirs and generators of vitality—the seat of our moral nature, or soul.

This ductless gland is liable to inflammation and its results, and when its interstitial structure is blocked up we have persistent leucocythema.

This is usually associated with malarial poisoning, which gives rise to splenitis with sharp pain, and fever. Antipyrin, antifebrine, thalline, karme, with local stimulation over spleen.

Induration. Caked spleen. Alteratives and tonics. Fl. ext. bear's foot; we have found the following of great efficacy: locally ozonized clay with peroxide of hydrogen. Persevere for six months.

Take two ounces of the fluid extract of *grindelia squarrosa*; one fluid ounce of the fluid extract fringe tree; half an ounce of the fluid extract of mandrake; one drachm of fluid extract lobelia and thirty drops of the fluid extract of belladonna. Mix all thoroughly, then add three drachms iodide potass. Dose: A teaspoonful every three hours.

The streptococci of foot disease in cows are often carried in their milk; may give rise to diphtheria, scarlet fever, malignant stomatitis. Same remedies should be pushed as for diphtheria and scarlet fever; keep the atmosphere of the apartment in which the patient is domiciled thoroughly impregnated with bactericides, using mouth washes of boroglyceride or peroxide of hydrogen, every hour; most nutritious liquid food.

Constant desire to void urine; with burning or cutting pain at the neck of the bladder and along the urethra. Hip baths, large doses of belladonna, passiflora, pulsatilla, gelsemium, alkalines, rest, warmth.

Two varieties, spasmodic and organic stricture.

Stricture of the **Stricture.** — Usually comes on suddenly during a meal, and is followed by a rejection of food, a sense of constriction and ina-

Esophagus.

bility to swallow ; often depends upon swallowing some acrid substance ; reflex irritation from the gums, stomach, bowels ; reflected to medulla ; then transmitted by weakened nerves that supply the circular muscular fibres or rings of œsophagus.

Remedies.—Apply stimulating remedies to the spine from the nape of the neck down ; administer extract sumbul and alternate with coca, lobelia comp.

Organic Stricture.—Consists in a thickening of the circular muscular rings, with lymph, excrescences, tumors.

The difficulty of swallowing is always encountered and permanent.

The digestive action of either papoid or trypsin has been tried in digesting organic stricture ; it is usually combined with boroglyceride paste and made into a bolus sufficiently large to swallow, but of such a size as to be arrested at point of obstruction, at which point it operates well, for it will digest the adventitious structure of a stricture more readily than a normal tissue ; it can also be inserted on the hollow point of a bougie.

Stricture of the Rectum.

An effusion of lymph either partially or completely around some of the circular muscular fibres of the rectum. This, the organic form. There may exist some sacral or coccygeal irritation or seat worms which may give rise to spasmodic contraction.

The only correct treatment for organic stricture is by gradual dilatation and absorption, and digestion of the stricture with papoid and boroglyceride.

Stricture of Urethra.

Effusion of lymph either as a band, or flattening in the lower aspect of the urethra.

The urine passing with difficulty in a diminished stream, flattened, spiral, twisted, divided.

Three forms : (1) due to spasm of muscular fibres ; (2) due to inflammation : (3) due to the effusion of lymph, causing contraction, narrowing, or a band across inferior aspect of canal.

In all cases, a careful diagnosis from enlarged prostate, irritable bladder, abscess in perineum, dilated urethra, diseased kidney.

1. Due to spasm, use cocaine suppository.
2. Due to inflammation, use cocaine suppository, and gelsemium internally.
3. Due to effused lymph, organic stricture.

Incision, burning, tearing by dilating, all false, erroneous. Absorption the only true, sure method of cure. Saxifraga internally, ozone ointment and metallic bougies for half an hour three times a week, gradually increasing the size of the bougie from one that passes easily to a No. 12.

Sun-Stroke. A condition of cerebral exhaustion, with evaporation of the watery constituents of the blood.

Its diagnosis is: a person exposed to the solar rays, or an overheated building, complaining of headache, insomnia, irritable, restless, face flushed, eyes congested, bowels constipated,—these followed by a sudden seizure of vertigo, headache more intense, dimness of vision, failure of muscular power, falls to the ground, insensibility, breathing stertorous, pupils contracted, skin intensely hot. Pulse and temperature very high, later weaker and irregular. There may be convulsions, with coma, or exhaustion, or syncope, patient may die without premonitory symptoms. In some cases there is stupidity, in others stricken down, insensible.

In the management of such cases the patient should be removed at once to a cool room, and placed in a recumbent position near an open window; the clothes are then stripped off and a stream of tepid water from a vessel held about four or five inches above the patient, directed first on the head, then on the chest and abdomen, and finally on the extremities, and thus alternating from one part to another until consciousness returns. Cloths wrung out of warm water over the spine are beneficial. Internal medication: Bromide of potassium or ammonium, the latter most efficient; when the patient is unable to swallow, it can be given by injections. In mild cases from 5 to 10 grs. may be given at intervals of from half an hour to one hour, until the grave symptoms disappear.

In more severe forms, from 10 to 30 grs. may be given every half hour. When the pulse becomes weak or intermittent, stimulants are needed. Stimulants should be resorted to in all cases where exhaustion is the prominent feature. Brandy and milk, or brandy with ammonia, must be introduced into the stomach, or rectum. In all cases in which the skin is cold, the cold douche must not be employed.

Surgical Procedures. application constitute a large portion of operative surgery. Common instruments used are the bistoury and
(*Epitome.*)

scissors. Some operations require special instruments.

Positions of the Bistoury.—1. As a pen. 2. As a pen, edge upwards. 3. As a carving-knife. 4. As a carving-knife, edge up. 5. As a fiddle bow.

The Position of the Scissors.—The last phalanx of the thumb passed through the upper ring, the phalanx of the ring finger through the lower, the index and middle fingers placed in front, under the lower handle, the little finger free.

Before using any instrument upon a living being it should be warmed to a temperature of 80° F.

Incisions are made in two different ways, from the skin to deep parts, and from the deep parts to the skin.

Incisions through the skin are ordinary incisions; those under the skin subcutaneous incisions.

Whatever the method may be, the incision may follow *five* different directions: 1. To the operator. 2. From the operator. 3. To the right. 4. To the left. 5. From above downwards.

As far as practicable, incisions should be made in the axis of the limbs, parallel to nerves and blood-vessels. In making incisions, extend the skin, and make it its full length and depth at one stroke.

A *simple incision* is a single cut; *compound incisions* consist of more than one, are very varied, but embrace the following as principals: **V** and **T**; crucial, $+$; elliptical, \ominus ; and in the form of a crescent.

They are subject to the following rules: All branches of a compound incision should be made as a simple incision; when one incision falls upon another, the second should always terminate in the first, and never begin from it. When two incisions have to be made, one above the other, the lowest should be made first, so that the blood should not conceal the situation of the first.

Incisions from within, outward, are made with the bistoury, with or without the director; without the director, the incision may be made in various ways. With the director, the usual method is to puncture, introduce the director right up to where the incision should terminate, then place the point of the bistoury in its groove, holding the instrument in the second position, at an angle of forty-five degrees, then pass it to the end of the director, cutting as it goes, then raise it perpendicularly and bring it out at the same moment as the director.

Subcutaneous incisions are made with the bistoury or tendon knife, or any special instrument. The character of these incisions is their smallness, valvular nature, exclusion of air, little, if any, degradation of normal living matter into germs, consequently no suppuration. Excellent for division of tendons. The knife is inserted flat, underneath a tendon, when inserted turn its cutting edge up, divide tendon, withdraw, and hermetically seal up.

Dissections are made of incisions. A puncture is merely first part of an incision, but punctures are often made for special purposes, as for vaccination, exploration, etc., and are usually performed by bistoury, trocar, lancet, exploring needle.

Cauterization.—By this term is meant the application of a caustic to a part, whose life and organization we wish to destroy. These remedies are either liquid or solid; pultaceous or powdered.

Conservative surgery lays down the following rules for their application:

1. Wipe all humidities from the surface.

2. Protect all the adjacent parts with adhesive plaster or gutta-percha and chloroform.

3. Apply caustic; if any blood exudes during the application, wipe it away.

4. After cauterization is complete, neutralize the action of the caustic.

The most valuable caustics are: The actual (the iron heated to a white heat), mineral and vegetable acids; caustic potass and soda; chloride of chromium; chromic acid; chloride and sulphate zinc, etc.

Ligation.—This consists in applying a ligature to a part to strangle and divide it—cut off its circulation, procure a separation, either by immediate constriction, or sloughing, or otherwise.

The nature of a ligature varies—several strands of saddler's silk, gold, silver or platinum wire, catgut, thread, etc.

Rules to observe in ligation:

1. Choose a ligature strong enough.

2. Include only a moderate amount of tissue in ligature.

3. Never include skin, if possible, in a ligature.

After it is applied for the removal of a part, there are three modes of procedure:

1. Immediate constriction by *ecraseur*.

2. Continued constriction by *ecraseur* or ligation.

3. Progressive constriction.

The first attempts at constriction are painful, but, as it progresses, the parts lose their sensibility, as well as their vitality. If it is a tumor, as the ligature tightens, it swells, enlarges, becomes livid, black.

The following precautions are to be observed in the application of all ligatures:

1. Tighten carefully and gradually.

2. If tissues are soft, easily torn, do not strangle at once, as a quick division is attended with hæmorrhage.

3. If tumor be hard, difficult to penetrate, carry on constriction gradually.

4. If any nervous symptoms supervene, as convulsions, spasms, loosen ligature until they subside.

Hæmorrhage.—This is an escape of blood from the vessel or vessels in which it is contained.

The method of arresting consists in ligation, compression by fingers, compress, tourniquet, winch, or acupuncture, that is, the insertion of needles under vessel so as to compress it and obtain union of internal coats of vessel—they should be inserted at least one and a-half inches from wound, on the cardiac side of vessel; styptics, elevation, bandages, when it is a general oozing in.

Styptics.—Bleeding from small vessels can be checked by ice applied to bleeding surface; by Monsell's solution of iron, by tannic and gallic acid, matico, alum, iron alum.

Torsion.—Is suitable for small vessels, seize them and make three or four sharp turns.

Urethral Hæmorrhage.—Try cold, introduce No. 12 catheter and apply compression by bandage. Give gelsemium in large doses.

Rectal Hæmorrhage.—Introduce suppositories of perchloride of iron.

Uterine Hæmorrhage.—Try the ordinary means, such as injections of hot water, elevation, rest, bandage, digitalis, turpentine and sulphuric acid internally; all these failing, plug the vagina.

Wounds and Sutures.—Wounds heal by either primary or secondary union. Union by first intention is obtained as follows:

1. Arresting hæmorrhage.
2. By removal of all foreign bodies, as pieces of dirt, clots.
3. By bringing edges into close apposition and holding them by sutures, aided with adhesive strips, bandages, compresses, antiseptic dressing; circulation, 75.

For the purpose of keeping them in perfect approximation until effused lymph unites them, "sutures," of which there are four varieties:

1. Interrupted suture.
2. Glover's suture. Used only to unite intestinal wounds and post-mortem.
3. Quilled suture. Used only in ruptured perineum.
4. Suture by needles, or button hole, simply a form of the interrupted. Observe the following rules in applying sutures: Wound cleaned; hæmorrhage arrested; edges brought together neatly and evenly, without dragging. The first suture, as a rule, should be inserted into the middle of the wound. Sutures inserted at an angle of forty-five degrees penetrate deep enough so as to leave no space for the collection of pus. Avoid pricking nerves, blood vessels and tendons; if suppuration is feared (union by second intention), a space at the most depending part should be left open so as to permit the escape of pus.

The distance between sutures will vary.

External Stimulants.—Designed to promote a renewal of life, as cantharides, sinaplasms, irritating plasters, acupuncturators, dry cups, baths, massage, etc.

Incised wounds are made by clean-cutting, sharp instruments. There are four indications in their treatment: 1. Arrest hæmorrhage; 2. Remove foreign bodies; 3. Bring edges together; and 4. Hold them by sutures, compresses. Dress with antiseptics.

Dissection wounds should be well immersed in hot water, encourage free bleeding, then cauterize, dress with antiseptics.

Punctured wounds are esteemed the most dangerous, from their depth, implicating blood vessels and nerves; viscera torn; laceration of nerves more liable to tetanus.

Contusions, or bruises, inflicted by some blunt instrument, ecchymosis liable to occur; apply arnica, marigold.

Sprains.—Rest, bandage, irrigation, arnica.

A break of bone.

Fracture. There is a predisposition in the bones of some individuals to break, from a deficiency of certain normal materials, usually the result of mercurial saturation, systemic syphilis and the like.

The exciting causes of fracture are mechanical violence, muscular action.

This violence may be *direct*, the bone giving way at point struck: it may be *indirect*, bone giving way between two opposing forces. Fractures are either simple or compound, complete or incomplete—*transverse, oblique, longitudinal, comminuted*.

The *essential* symptoms of fracture are *crepitus*, preternatural mobility, deformity. In addition there may be ecchymosis, pain, heat, redness, swelling, but none of the latter are *essential*.

There are fractures in which neither crepitus, preternatural mobility nor deformity exists, as in fracture of the base of the skull, caused by falling from a height on feet.

In simple fracture, bone only broken; in compound fracture not only is the bone broken, but it has penetrated through muscles, blood vessels, nerves and skin.

There are four indications in the treatment of all fractures:

Place the bones in their natural position (set the fracture).

Place the limb, in order to do that, in such a position as will relax all the muscles.

Retain it in such a position—

By an appropriate dressing apparatus—anything that will rigidly fulfil those indications.

Health must be maintained at as high a standard as possible, and there must be no pain in the fractured parts.

If these indications are perfectly carried out, there is effused by nature from the marrow, bone, periosteum and all the adjacent tissues *lymph*, which becomes organized and unites the ends of the bones. This lymph, at the end of six weeks, becomes firm enough to grasp the ends of the bones together, but it requires four months and a half more, making six months altogether, before the bones are firmly knit together.


This lymph that is effused for the purpose of union is called a *provisional callus*. Nature effuses this the moment she recovers from the shock, and continues to throw it out for about ten or twelve days, when the process of consolidation, union and absorption takes place. At the end of six months not a vestige of it remains.

There are cases of fracture in which the standard of health is above the average—the four indications of treatment perfect—

where the broken bones will unite by first intention, without the formation of this provisional callus.

Old age, feeble vital force, shattered manhood, blood and bone charged or loaded with mercury, germs of syphilis, cancer, bacilli of tubercle, etc., are conditions in which the provisional callus will not become bone, but ligament, where a non-union or false joint takes place—a state in which, in spite of all friction or stimulation, a process of interstitial absorption and degeneration takes place in the broken ends of the bone.

As it is contrary to the provisions of nature, bony union never, except very rarely, takes place within joints. There are many reasons assigned for that, as defective nutrition, character of structure. Neither does bony union take place in flat bones, bones destitute of an epiphysis.

In spite of the most rigid antiseptic precautions, there are *three* things that render *compound fractures* more dangerous than simple ones: *The shock*; the danger of laceration of nerves and blood vessels; the risk of long, tedious suppuration attendant upon bone exposed to the atmospheric germs.  With 75 per cent. of our population suffering from the bacilli of tubercle, 50 per cent. from systemic syphilis, and about 6 per cent. cancer germ, surgeons should be cautious in their prognosis of fracture.

One man out of every eight in the United States
Hernia. suffers either from a predisposition to or from actual rupture, the escape of the bowel from its natural cavity.

The *predisposing* cause is some weakness or defect—a want of proper support. The *exciting* causes are lifting, hoisting, jumping, coughing, straining.

If it occurs at the navel, it is called umbilical. If occurring where the testis has descended, inguinal. If where the large blood vessel escapes, femoral.

When the viscus protrudes, it forms a tumor or swelling, which dilates when the patient coughs, diminishes or disappears when he lies down.

This protrusion or sac consists of bowel or omentum, one or both, and it may be reducible or irreducible or strangulated. The method of reduction is by manual operation, technically called the taxis.

In performing the taxis the patient must be profoundly relaxed, by either the administration of comp. lobelia, or ether or chloroform. There must be an assistant in all cases, to knead the abdomen well to the diaphragm. Then the tumor or sac should be well drawn forward in the axis of its neck and the bowel returned into abdomen and held there by compress or truss, and the Mexican ointment kept constantly applied till orifice is obliterated.

From Stricture.—Put the patient in a warm bath in which an infusion of lobelia has been poured, inject the rectum with same infusion; while in the bath, insert a catheter, a No. 12 if possible. If once inserted, retain it there for ten days. If it cannot be passed, try a smaller one, and proceed with it gradually until the urethra is of normal size.

From Enlarged Prostate.—Proceed in the same method, using cocaine suppositories to procure absorption.

Circumcision. Slit the foreskin in centre to the corona, turn back and turn it all round, except the bridle, unite the skin and mucous membrane by numerous fine lead wire sutures. Dress with lime water and tincture of iodine. In infants this procedure is unnecessary, a simple slit being all that is required.

Ganglion.—Insert a strand of seven threads of saddler's silk, withdraw one every morning, apply a lotion of boroglyceride. Compression, painting with iodine or other irritants useless.

Trepanning. If there is already a scalp wound, enlarge it; if not, shave the scalp and make U-shaped incision down to the bone and peel back periosteum with the flap of the scalp. Avoid regions of longitudinal and transverse sinuses and also the middle meningeal artery. Adjust the trephine so that the pin shall project beyond the teeth. If there be a fracture, place the teeth on the firm edge of the bone. In working, press evenly on all sides. After penetrating a short distance withdraw the pin into crown of trephine. As *dura mater* is approached proceed gently, and frequently probe with a piece of quill, obliquely sharpened to a point. As soon as *dura mater* is detected, tilt trephine to the other side. When loose enough remove disc of bone with elevator.

Hare-lip.—The best time to operate is about three months before dentition. Roll the child in a sheet, to be held in assistant's lap. Pare the edges of the cleft thoroughly. Remove enough, especially from the apex. Coapt edges, insert two or three hair-lip pins, enter one-quarter of an inch from fissure, pass deeply two-thirds from anterior surface; after all are inserted, seam with hair-lip sutures. Cut off sharp edges of pins. Place a piece of lint underneath them. The conditions of union will tell when pins are to be removed.

Nævus.—Capillary nævi, best treated by painting them over with nitric acid or perchloride of iron.

Intussusception.—Place the patient under anæsthetic, inject large quantities of warm water and olive oil into the bowels.

Thoracentesis.—When effusion in the chest is great with impending suffocation, insert the needle of aspiration or the trocar and cannula between the fifth and sixth ribs, two-thirds the distance from the spinous process of vertebræ; if trocar is used,

rotate it gently until it penetrates the pleura and the serum appears on the fingers, then withdraw the cannula and allow serum to flow out.

Paracentesis Abdominis.—In ascites, abdominal dropsy, to remove fluid by operation. Bladder and bowels empty, patient sitting in a chair with a flannel bandage, so slit up into tails that it can be held and tightened by two assistants. Two and a half inches below the umbilicus in the median line, either insert the aspirator or the ordinary trocar; if the latter, insert with a rotary movement until the serum oozes through the cannula, then withdraw cannula. Continue until the entire fluid is drained off, the two assistants using compression with bandage. When all the fluid is drained off, apply a piece of adhesive plaster over the wound, then give patient opium, and to overcome inertia of the bowels, give large doses of the solid ext. hyoscyamus with castor oil. Guard against peritonitis.

The mesentery belongs to that class of blood raising glands, as the lymphatics, pink marrow, any damage to it, infiltration of its proper structure with either the products of inflammation or the bacillus of tubercle, renders it unfit to perform its functions.

The summer diarrhea of infants, with its green stools, or prolonged cholera infantum, creates a tubercular diathesis, and the local irritation of the comma-bacillus in the bowels gives rise to effusion of tubercle throughout the entire gland, the abdomen enlarges, the blood becomes anæmic, and the amount of the tubercular bacilli in the mesentery is so great, that it quickly undergoes its usual metamorphosis,—milky, cheesy, calcareous.

Same remedies as for the destruction of the tubercular bacilli.

Tetanus. Inoculation of garden earth, spring or fall, into any mammalia induces tetanus. *Microbe of* And the bacilli found in their blood is *(Garden Earth.)* identical with that found in man.

The diagnosis of the disease as seen in man, the history of the case, even if carefully examined, shows nothing, for a wound, a scratch, an abrasion, into which garden earth enters, may not exist, as the microbe can be carried by towels or clothing which have accidentally fallen on the ground, through slight abrasions. The spasm of all the voluntary muscles beginning at the jaws (trismus); or involving the muscles of the front part of the body (emprosthotonos); or the muscles of the back, patient resting on occiput and heels (opisthotonos); intellect clear, corrugations of the muscles of the brow, all in a state of chronic contraction.

A microscopical examination of the blood shows that it contains rods very fine, like thread forms, mostly collected in irregular masses, with characteristic spore formation.

The germ bears culture well in beef broth—growing stronger—more vigorous after each culture. These cultures injected into animals reproduce the original disease, the germ is therefore both contagious and infectious; it has a definite period of incubation and activity, depending upon the vital force of the individual inoculated. Active symptoms appearing 24, 48, 72 hours after an abrasion rarely survive over the fifth day; but if it is from nine to thirteen days in appearing much more hopeful. Highly contagious and infectious. The habitat of the germ is the blood, but its ptomaine excretion or alkaloidal tetanine poison is spent upon the medulla oblongata. Some claim where much garden earth enters that the integrity of the medulla may be destroyed before the germ really has time to form spores in the blood.

Such cases require great care, sound judgment. The sterilization and annihilation of the germ is effected by keeping the muscles thoroughly relaxed by the administration every few minutes of a mixture of lobelia, valerian, and capsicum, equal parts. Follow these with our most powerful bactericides, either peroxide of hydrogen, or sulphide of lime.

FOR A MOST ELABORATE DESCRIPTION OF THE MICROBE OF TETANUS, ITS PTOMAIN "TETANOID," MAGNIFICENT ILLUSTRATION OF THE GERM, A NEWER AND MORE SUCCESSFUL TREATMENT, SEE PAGE 396 OF THE LARGE WORK ON "BACTERIOLOGY."

Sore mouth, ulcers on the cheek, gums, tongue, uvula, tonsils. Breaches of continuity, due to mal-nutrition or analogous states, have in them this micrococcus, which can be communicated by local contact, or even by the breath. Common in nursing children who communicate it to the nipple, as well as individuals more mature. Other microbes, as the tubercular, syphilitic, etc., may make inroads into the mucous membrane, produce ulcers, but associated with these, the *oidium albicans* is ever present.

It is readily diagnosed, the grayish-white patches, or ulcers on the mucous membrane of the mouth and nipple. Any secretion from any of them placed in the field of the microscope exhibits cells, partly round, oval, or cylindrical, all sizes. The bud colonies consist of rows of cylindrical cells; from the ends, oval or round cells sprout; spores form singly in roundish cells.

Besides the mouth and nipple, the *oidium albicans* are often found on other mucous membranes.

The *oidium albicans* bears cultivation well in sweetened water to which a little tartrate of ammonia is added, the cells germinating according to its richness in sugar.

The *oidium albicans* is sterilized and completely annihilated in the presence of a solution of boroglyceride, resorcin, creolin, naphthalin, thymol jelly.

FOR A MORE EXTENDED DESCRIPTION OF THIS GERM, ITS EVOLUTION, AND NEWER METHODS OF TREATMENT, ILLUSTRATED, SEE THE LARGE WORK ON "BACTERIOLOGY."

Tonsillitis.

(*Acute and Chronic.*)

Individuals suffering from poverty of nerve-force, with either the microbes of syphilis, tubercle in the blood, are very liable when exposed to sudden changes of the weather, spring and fall, to depression of the tonsils and to quinsy or tonsillitis, in which they are enlarged, red, swollen; difficulty of swallowing; a white, concrete matter seen on the tonsils; prostration, fever, restlessness: apt to terminate in abscess, induration, enlargement. First either an alcoholic vapor or Turkish bath; warm room, in bed, concentrated ozone over the angle of the jaw; inhale warm vapor of ammonia from an atomizer, gargle with either resorcin or chlorate potassa or boroglyceride or peroxide of hydrogen.

Administer internally aconite and belladonna and compound syrup tolu, iodide and bromide of potassa.

General course of tonics and alteratives.

Tuberculosis.

The Bacillus of Tubercle.

Meagre, insufficient, deleterious food; absence of sunlight; solitary confinement; monotony; sameness; isolation; excesses of all kinds; insanitary states; everything hurtful to human existence; the presence of disease germs in the blood, such as those of syphilis or rheumatism or reflex irritation; anything which can be construed into a source of human depreciation, as excesses of all kinds.

Anything which impairs vital force, which presides over blood elaboration; any adverse state which has a depressing effect on the evolution of bioplasm, changes, alters, degrades it into other living matter which has prodigious powers of growth and reproduction.

When an individual possesses this depreciated nerve force, all the vital elements of being are feeble. The size and number of red corpuscles are diminished, the skin is then white; there is an undefinable languor, debility, an inertia in every vital organ, even to the pink marrow of the bones. Muscles and bones soft, hair dry, and there can be detected in all cases the tubercular bacillus in the blood.

Besides the evolution of the bacillus from the protoplasmic elements of their own blood, the microbe may find ingress to the non-affected by the skin, generative organs, the digestive

tract and lungs, chiefly by the latter in inhaling the germ-laden sputum of the affected.

This appears in the fresh drops of blood in the form of rods, occasionally long, very thin and rounded at the ends. They are straight or curved, frequently beaded; occur singly, in pairs, or in bundles.

A tubercle bacillus consists, for the most part, of a very delicate sheath, with protoplasmic contents, which have a great tendency to be broken up, or coagulated into little segments or roundish granules.

The bacilli are found in all who possess this impaired nervous defect, in every solid and fluid of the body, breath, sweat, saliva, feces; in the interior of glands and vital organs, in all locations and under all conditions propagating by spore formation.

Contagious and infectious in the true sense of the terms, communicated in a thousand ways, from the atmosphere near those who are germ smitten, the bacilli or their spores are inhaled from the air, and pass in throughout the pulmonary mucous membrane to the blood; taken in by food, such as milk, beef, mutton and domestic fowls, pass through the gastric and intestinal mucous membrane; by close contact, as kissing and otherwise, sleeping with the affected, breathing their dried sputum, etc.

The tubercular bacilli is pathogenic of all forms of tubercular disease. It bears cultivation well, and the inoculation or hypodermic injection of the cultures into animals reproduces the disease. The bacillus is a great ptomaine excretor, which gives rise to hectic, profuse sweats, diarrhea.

The best medium for cultivation is the blood serum of the cow or sheep, kept at a temperature of 98. They grow very slowly in cold atmospheres.

Morphologically identical bacilli are seen in lepers, tabes, coxalgia, rickets.

The bacillus tuberculi is both sterilized and annihilated in the presence of bactericides, of which the glycerite of ozone is the most reliable and definite, but distillation of the pine tar, creosote, chlorinated soda, sulphur water, comp. oxygen, comp. syrup of tolu, peroxide of hydrogen; glycerite of kephaline, avena sativa, guaiacol, are also of utility.

The great difficulty in treating tuberculosis is, there exists a nervous blight, defect or wreckage, which keeps up additional degradation of normal bioplasm a perpetual crop, so to speak, of new germs, and until this point is overcome by diet, massage, location, baths, a cure is difficult.

FOR A MORE ELABORATE DESCRIPTION OF THIS HIGHLY CONTAGIOUS AND INFECTIOUS DISEASE GERM, THE TUBERCULAR BACILLUS, SPLENDIDLY ILLUSTRATED, SEE PAGE 397 OF THE LARGE WORK ON "BACTERIOLOGY."

The Bacillus Tubercle in Lung.

Pulmonary consumption; deposit of the germ tubercle in the substance of the lung or on the lining of the bronchi; infiltration, localization or colonization; in the substance of the lung, being spongy, germs grow and fill up the lung; transformation into cheesy and chalky masses; proliferation in the lung from blood; germs die, are expectorated, and leave excavations of portions of the organs. These abscesses, though rarely, cicatrize; tubercles may undergo transformation into harmless, chalky masses. S: *First Stage*—Dry, hacking cough; shortness of breath; pulse easily excited; pains about the chest; hæmorrhage, from slight streaks to profuse discharge; feverishness, wasting. *Second Stage*—Increase of fever, debility, loss of appetite; then purulent expectoration, with blood or yellow, cheesy flakes; then hectic; chills, night sweats, exhaustion and emaciation; hoarseness, colliquative, diarrhea, œdema of the extremities; intellect clear to the last; patient unusually hopeful. *First Stage*—Obscure at first; dullness under clavicle on one side; then feebleness of respiratory murmur; bronchial respiration, with prolonged expiration; sounds of the heart loud and ringing; mucous and subcrepitant rales; contraction of upper part of chest. *Second Stage*—During formation of vomicæ mucous bubbles larger and more numerous after opening, cavernous rale or gurgling; cavernous respiration and resonance; pectoriloquy, sometimes amphoric or *cracked metal* sound. C: Pleuritis, adhesions of pleura, bronchitis; laryngeal ulceration; enlarged bronchia, tubercles and perhaps ulceration in the liver, pleura, pericardium, peritoneum, stomach, intestines, mesenteric glands, spleen, kidneys, prostate, testes, membranes and substance of the brain, lymphatic glands and bones; inflammation and ulceration, especially of the stomach, intestines and larynx; peritonitis, fatty degeneration of the liver, and in children hydrocephalus; bronchitis, pneumonia, emphysema, pneumothorax.

Remedies.—Alteratives and tonics, glycerite ozone, kephaline, oats; tar plaster or ozone ointment over lung continuously; ozonized tar syrup. All remedies must be vitalizing and germicide. Germicides are the never failing remedies for pulmonary tuberculosis. They must be administered by all channels of ingress so as to enter the blood and destroy the bacilli tubercle, the factor of the disease; by the stomach, as the most available entrance; by the skin, with or after massage; all the time over the damaged, germ-smitten lung or bronchi, by plasters, inunctions or by ointments; and by inhalations of ozone atmospheres, of the pine woods, or ozone generating perfumes, which are inimical and scavengers to disease germs; by warm vapors of antiseptics from atomizers, three times a day. These latter are of use.

The recent introduction of the gaseous rectal treatment of

pulmonary phthisis has been the most miserable expedient ever tried, and has justly excited the derision of all scientific minds.

More recently the administration of different preparation of lime has been pushed forward as a means of producing a calcification of the microbe. It is worthy of a trial.

Still more recently the peroxide of hydrogen has been tried, locally, internally by stomach and rectum; also by inhalation. The diminution of symptoms and arrest of the disease under this remedy are nearly equal to glycerite of ozone. Guaiacol has a remarkable action on destroying the germ as well as remedying the defect of nutrition.

Whatever the future may yield we cannot say, but our faith is unshaken in germicidal remedies, to destroy the germ the factor of the disease, and build up vital force so as to prevent its evolution.

As there are rectal ulcers loaded with the microbe in eighty cases out of one hundred, that viscus merits unremitting attention; *rectal* tonics to destroy germs; *rectal* medication, meat juice and glycerite of ozone; rectal alimentation by pancreatic suppositories and cotoin.

The ulcer, if it exists, must be treated with germicidal remedies. The state of the rectum as to ulcer or fistula in pulmonary tuberculosis is of vital importance.

General Measures.—Equable temperature, flannel clothing, daily bath, massage, germicides, pure air, containing ozone.

Diet.—Most nutritious; juice of meat, cream, eggs, gelatine, strong rich broths, highly animalized foods, cereals.

or Sero-cystic Disease.

Tumors

of the Breast,

Most common among young unmarried ladies, due to ease and over feeding.

Globular, painless, seldom large, like a marble, movable serum may ooze from the nipple. Disease remains stationary for many years, but is prone to end in cancer.

General Measures.—Improve the general health by using alteratives and tonics, saxifraga and coca, and keep the breast protected from all irritation.

Fibrous Tumors, due to irritation which causes an effusion of an adventitious amount of this substance.

Absorption may be excited in a large percentage of cases with the ozonized clay, and such alteratives as saxifraga and phyto-lacca.

Lactcal tumors best got rid of by the application of belladonna.

Usually belong to one or the other of three

Tumors of

the Labia.

First.—Encysted or sebaceous.

Second.—Vesicular or oozing, attended with profuse, watery, acrid discharge.

Third.—Warts.

The two former should be removed; the latter will be overcome by the use of thuja, internally and locally.

Vascular Tumor of the Labia or strawberry excrescences, extremely sensitive and tender, bleed freely if touched. Removed by touching them with solution of chloride of chromium or chromic acid, followed by boroglyceride. Keep the urine alkaline by using nitrate potass.

Due to irritation. They are either *serous*,
Tumors. *fibrous or sebaceous*; the serous and fibrous are
Ovarian. most amenable to absorption by the application of the ozonized clay daily, never to cause redness—the introduction of pastilles per vaginam and rectum twice daily of salix nigra; the salix nigra in form of an ozonized fluid ext. administered thrice daily, alternated with saxifraga. The introduction daily of an aristol pastille exercises an absorbent action upon ovarian enlargement.

The sebaceous does not admit of absorption.

Occasionally the cancer germ localizes there, which is known by the pain anterior and posterior.

Typhoid Fever, Typhoid fever, a peculiar form of enteric fever which prevails endemically and epidemically among those whose nervous systems are greatly shattered, caused by the presence of the bacillus.
(The Bacillus.)

Its recognition is easy, great nervous prostration with intestinal disturbance; white pallid skin, sharp cut features, often deafness, bleeding from the nose; generally buff-leather-coated tongue, sometimes variable, patchy elevated papillæ, sordes on gums, rigors, fever; frequent, wiry pulse, high temperature, diarrhea, bloody stools; phosphates and chlorides in urine; petechia, sudamina, and by the presence of the germ.

The bacillus consists of rods, broad, and forming filaments, rounded at their ends, looking like small feathers, or yarrow leaves, exhibiting spore formation. These bacilli are found in the blood, on the sordes on the gums, breath, Peyer's patches, the spleen, mesenteric glands, lungs, urine.

Spore formation depends on the status of vital force, usually active, occurring at the ends of the rods. The microbe is pathogenic of the fever, bears cultivation well in almost any nutrient broth. Inoculation into any animal reproduces the disease.

Although the microbe is to be found in every solid and fluid of the body in typhoid fever, still it is in the bowels, in the glands of Bruner and Peyer, where they breed most profusely, and the fæces are literally swarming with them. It is chiefly during their growth and multiplication in the intestines that the

ptomaines are excreted, and that wonderful toxic alkaloid *typhotoxine* is formed.

The vitality of this germ is so great that freezing will not destroy it, and it takes a very high heat to kill it. The germ is aerobic, so it can be communicated by contagion and infection, by air, food, clothing, water, milk, seats. Stools of the germ-stricken should always be destroyed by fire, as they live in the earth, sewers, drains, water.

Recumbent posture, two rooms if possible, so arranged that bed could be moved in on casters without disturbing patient, each room disinfected alternately with burning sulphur, for if the patient is suffered to remain in the same room, wear the same bed clothes and linen, he is at all time suffering a reinoculation from the microbes on walls, floors, clothing; and thrice daily sponge or bathe entire body with a germicide wash; solution of boroglyceride, warm vinegar and water; liquid diet.

The bacillus is sterilized and completely annihilated in the presence of either of the following remedies, (bactericides): mixture of carbolic acid and tincture of iodine (see carbolic acid for formula); or resorcin, salol, iodol, naphthalin, lactic acid, creosote, sozoiodol, creolin, kaki, siegesbeckie, turpentine.

General Measures.—The patient should be placed in the best room in the house, well ventilated, bactericides exposed in the apartment. All insanitary conditions, if any, removed, body and bed linen changed frequently and immersed in water acidulated with sulphuric acid. All evacuations from the patient destroyed by pouring over them a saturated solution of sulphate of iron, and buried deep in the earth far from wells.

The patient should be carefully nursed, thrice daily his lips, gums, mouth, should be washed with a solution of boroglyceride; just as frequently should his entire body be bathed with either warm bicarbonate of soda water, or else vinegar and water.

Typhotoxine, the ptomaine alkaloid enfeebles both heart and brain, so artificial heat to feet; some potent bactericides should be kept over the abdomen in a hot poultice, changed repeatedly. He must not be suffered to remain in one position over three hours. The hips and back must be carefully examined for redness, if such should occur, they should be bathed with alcohol, and after they must be dusted over with anti-microbe powder.

The patient must never be permitted to get up, either to urinate or defecate, but must invariably maintain the horizontal position.

Milk and beef-tea make the best diet. Solid food, fruits, vegetables, must in all cases be strictly forbidden.

FOR A MORE EXTENDED DESCRIPTION OF THE TYPHOID BACILLUS, BRILLIANTLY ILLUSTRATED WITH THE GERM IN WATER, IN SEWAGE, IN THE INTESTINAL GLANDS, WITH THE MOST RECENT METHODS OF TREATMENT, SEE PAGE 333 OF THE LARGE WORK ON "BACTERIOLOGY."

Typhus fever is the outcome of crowd^d ing large bodies of men, women and children in small areas, aggravated by insanitary conditions, common in European cities, in prisons, ships ; contagious and infectious.

Typhus Fever. Easily recognized by the history of the case, fever, coma or stupor, difficult to rouse, constipation, face flushed, tongue coated brown, pulse full, bounding, after fever has lasted a few days a measly rash makes its appearance on chest, abdomen, face, and, in bad cases over the entire body ; by a microscopical examination of the breath, saliva, sweat, scraping of the tongue, eruption, the deadly micrococcus can be seen, actively motile, dumb-bell cocci, which are pathogenic of this fever. The germ can be isolated from the blood, cultivated, cultures injected into any animals, give rise to the fever. The ptomaine is a pure alkâloid, and is the cause of the stupor or coma.

General treatment for fever, with a course of germicides, as sulphide of lime, siegesbeckie, sulphur water, to destroy the micro-organisms in blood.

Ulcers Are breaches of continuity of surface, either caused by some unrepaired injury, or inflammation.

Numerous varieties.

Healthy.—Dress with lotion of boroglyceride ; cover with oiled silk ; keep constantly wet.

Irritable.—Apply hot fomentations of lobelia ; dress with linseed meal poultices and laudanum ; lotion of nitric acid ; lotion of aromatic sulphuric acid and quinine ; keep the part at rest.

Inflamed.—Keep elevated. Treat same as above.

Unhealthy ; Indolent.—If the edges are rough, uneven, callos surface, smooth it all over with caustic potassa. Then apply vinegar. Poultice until the eschar separates ; then apply ozone ointment or lotion of boroglyceride until it heals.

Sloughing.—Occurs in those whose constitutions are broken down ; germs of *oidium albicans* in the ulcer.

Try lotion of lime water and tincture of iodine, tincture of benzoin, lotion of chloride of lime, boroglyceride, jequirity. Build up the general health by good food. Use *avena sativa*, *kephaline*, glycerite of ozone and coca.

Varicose.—Associated with or dependent on varicose veins of the lower extremities. Best treated with elastic stocking and ozonized extract of *hamamelis*.

Gangrene.—Apply a poultice of charcoal and yeast, so as to obtain line of demarcation. The dead part to be removed, and dress same as in sloughing ulcer.

Remedies.—All ulcers should be treated constitutionally, by alteratives, *saxifraga*, tonics, *cinchona*, mineral acids, *kephaline*, *avena*. Take rest and apply bandages ; best of diet.

Ulcer of Stomach.

Ulcers on the stomach are usually round, scooped out; consequently there is always danger of perforation of the walls of the stomach from open blood-vessels in the ulcer.

Kaki, hydrastis, hyoscyamus, gold thread, mineral acids, glycerine, papoid, pepsin.

Complete cure often takes place with great care, as absolute rest in bed.

Diet.—Nourish by nutrient enemata; give milk and lime water, boiled arrow-root in milk all the time; drink a strong tea made of kaki. It is of inestimable utility. External stimulation of value.

Uræmia.

Generally an attendant during the last stage of Bright's disease or kidney degeneration, or some impediment or obstacle in kidney. Try infusion of digitalis, or strophanthus, jaborandi, ozone water, baths; bowels very active.

Use every possible means to remove the obstruction and restore the action of the kidney; hot poultices, packs, free purgation, alcoholic vapor bath.

Uric Acid Crystals.

From imperfection aeration of blood, mal-assimilation, carbonaceous food, malt liquors; uric or lithic acid accumulates in the blood, kidneys, where it gives rise to most excruciating pains in the loins, nephralgia, irritable bladder, burning sensation in urinating.

In the treatment remove all causes:—alkaline baths, free action of bowels, select some of the following remedies:

Nitro-muriatic acid; nitric acid and cinchona; ozone water; hydrangea; gelsemium, uric acid solvent, pichi, benzoic acid, peroxide of hydrogen.

A most excellent formula in such cases is the following: Take of biborate of ammonia, one ounce; water, one pint. Mix. A tablespoonful before each meal. Or, take half an ounce of biborate of ammonia; uric acid solvent, four ounces. Mix. One teaspoonful before meals.

Varicocele.

Varicose veins of the spermatic cord, which feels like a bag of worms, dilates when he coughs, disappears or diminishes when he lies down. General alteratives and tonics, best of food, hip baths, suspensory bandage and the local application of ozonized extract hamamelis effect a cure. Internally coca, kephaline, avena sativa; urethral bougies of damiana. Persistent perseverance.

Varix.

Varicose veins. Debility is the predisposing cause; sedentary habits, pregnancy, certain occupations are exciting causes.

They are relaxed, dilatable, purple ; knotty and become filled up with blood, which often coagulates.

Strengthen the system with tonics and best of diet ; remove the cause. Ozonized extract of hamamelis is the only remedy adapted to all cases, which should be constantly applied with some form of mechanical support, as a bandage or elastic stocking.

Variola, due to the presence of a microbe in the blood. Once the germ enters the body either (*Micrococcus*.) by the mouth, bronchial mucous membrane, or skin, it takes precisely twelve days to sprout, during which time the patient suffers from languor, lassitude, debility, nausea, and vomiting, pain in the loins, and a gritty feeling in the skin. At the end of this stage of development, rigors and a fever, active germ proliferation and ptomaine excretion commence, which last three days, then a papular rash makes its appearance over the chest, abdomen, face, limbs, and sometimes on the mucous membrane of the eyes, nose, mouth ; papulæ fill or mature in eight days, cicatrization taking place in from seventeen to twenty-four days. The state of vital force, the amount of germs present in the blood, will give the type of fever, whether the papulæ be few and small, constituting chicken-pox, or papulæ large, numerous, constituting what is known as varioloid ; or larger still, even more numerous, small-pox ; (*discreta*) ; or still more numerous, running into each other (*confluent*).

In any of its stages, its diagnosis is easy. The nausea, vomiting, pain in the loins, with gritty feeling of the skin, during the twelve days when germ is sprouting ; the rigors, fever, subsidence of the vomiting and loin pain, lasting three days, and the papular eruption appearing, first as papules, then as pustules, regular pocks, peculiar odor.

By the microscope, in the early stage, the micrococcus can be detected in the breath and urine, later on in the pustules, micrococci, either isolated or united, same microbe in the mucous membrane of the mouth and larynx.

The micrococcus found in the pustules is chemically, morphologically, and microscopically identical with the cow-pox.

The micrococci are pathogenic of the disease, bear cultivation well in any warm, nutrient broth ; cultures, either injected or fed to animals or man give rise to the disease.

General treatment consists in keeping the patient in a warm room darkened with yellow curtains ; some volatilizing bactericides exposed so as to keep atmosphere filled with a microbe killer ; bathing, fluid nourishment.

The germ at any period of its growth, can be either sterilized, or completely annihilated by the administration of the ozonized oil of thuja, or sulphide of lime; dioxide of hydrogen; bichloride of mercury.

FOR AN EXTENDED DESCRIPTION OF THIS GERM, WITH ILLUSTRATIONS, NEWER TREATMENT, SEE THE LARGE WORK ON "BACTERIOLOGY."

Systemic Syphilis. (*The Venereal Bacillus.*)

Syphilis, due to the ingress of the venereal bacillus in the blood, its evolution and growth in that life giving fluid. The germ may enter the body by many channels, by close contact, by drinking-cups, by bed clothes, by slight cracks or abrasions anywhere. It is not essential for its evolution and growth that it form a pack or colony. Once in the body, its growth, spore formation, ptomaine excretion, depends entirely upon the status of vital force of the individual into whom the microbe has passed. If the vital force be low, germ breeds actively and selects weakened parts in which it forms colonies or aggregations. If it is normal, its evolution may be retarded, it may lie dormant for years, or all through life, if vital force be maintained.

Its presence in the body, if vital force be high, is difficult to recognize, for the microbe is latent; but if vital force be low, the germ is active, then it is recognized by the following landmarks: general languor, lassitude, debility, nocturnal pains; when the electrical forces of the atmosphere are lowered at night, enlargement of the post-cervical glands of the neck, pain in the sternum; if the microbe appears in the skin, it loses its sensibility over the eruption and becomes copper-colored, if upon the mucous membrane of the mouth, copper-colored with round, scooped out ulcers; if upon the bone, periostitis with nodes. If the lungs are weak the microbe will excite symptoms analogous to pulmonary tuberculosis, so with the brain, bronchi, hair and nail matrices, liver, kidneys.

A microscopical examination will settle all doubts; place a little of the discharge from any sore in the field of the glass, from the mouth, skin, or a drop of blood, then it will show very minute rods, usually two or more ovoid points, are visible in the course of the rod, which are spores. In the blood they are seen imbedded in the interior of the nucleated cells.

This microbe is pathogenic of systemic syphilis. It bears cultivation, and cultures injected into all red blooded animals produce the disease.

The ptomaine excreted from the syphilitic germs are peculiarly toxic.

The entire range of medical science has been revolutionized by the discovery of the syphilitic microbe.

The venereal bacillus is sterilized and annihilated in the presence of saxifraga, kalmia, phytolacca, stillingia, iodide potassa, gold chloride, sulphur, iodine, peroxide of hydrogen and other bactericides.

FOR A MORE EXTENDED DESCRIPTION OF THE ORIGIN OF SYPHILIS, ITS SYMPTOMS, THE CURATIVE DRUGS, WITH SPLENDID ILLUSTRATIONS OF THE GERM IN ALL ITS VARIED PHASES, SEE PAGE 1190 OF THE LARGE WORK ON "BACTERIOLOGY."

Warts. An elongation of the cutis vera, or of
Bacterium follicles of the mucous membrane, owing
Porri. to some adverse state or condition in which
 the protoplasmic elements are either changed,
 altered or degraded into a disease germ, the
bacterium porri, which is pathogenic of warts.

The microbe bears culture well in any warm nutrient fluid, if cultures are injected into any animal it invariably causes an abundant crop of warts to appear over the entire body. Contagious and infectious on close contact.

The microbe is at first sterilized, then completely annihilated by the internal and local administration of thuja occidentalis. Lactic or acetic acid also of efficacy; peroxide of hydrogen, bichloride of mercury excellent as follows: Fifteen grains of corrosive sublimate added to one ounce of collodion; painted on the wart once daily until it entirely disappears, is efficacious.

The Yeast Fungi. In catarrh of all the hollow organs of the body as the stomach, bowels, bladder, uterus, the yeast fungi grow side by side with the sarcinæ. Yeast torula consists of spherical or oval cells, very much larger than the largest micrococci; each cell consists of a membrane and contents. The contents are either homogeneous, or finely granular protoplasm; in the latter case there are generally present one, two or more vacuoles.

There are a great many species of torula, varying from one another morphologically, chiefly in their size, and physiologically by their action on different fluids.

The cells of all of them multiply in suitable media by gemmation, a minute knob-like projection appearing on one side of the cell and keeps enlarging till it reaches nearly the size of the original mother cell. It finally becomes constricted, or exfoliated off from this latter, or having reached its full size remains fixed to the mother cell, and each cell again producing by gemmation a new cell. In this way, aggregations of four, six, eight, or more cells are formed, which may be arranged either as a chain, when the production proceeds in a linear manner, or otherwise, or as a group if the gemmation takes place laterally.

Under varying conditions of nutrition or growth, yeast cells

enlarge twice, thrice, and more times; form in their interior two, three, four, or more cells by endogenous formation.

These new cells are regarded as spores, the mother cell being an ascospore, and finally becomes free by bursting the membrane of the mother cell.

Classifying them according to their physiological function, there are various species of torula or saccharomyces; all of them possess the power to split up sugar into alcohol and carbonic acid, but this power is not possessed in the same degree.

Torula cerevisiæ, ordinary brewers' yeast, is found in the human stomach in gastric catarrh; in the bowels in intestinal catarrh; in the uterus and bladder in catarrh of both organs. Their presence in those organs gives rise to intolerable uneasiness and pain, and results of a fatal nature are due to their presence in the hollow viscera. The yeast fungus, in the uterus in intra-uterine catarrh, grows well, as the catarrhal secretion is slightly acid and little saccharine matter present, cells elongate when the case is chronic into cylindrical elements, a linear series, separated from each other by a thin septum, a mass of filaments, resembling a mycelium or elliptical torula cells.

Chronic cases of gastric and intra-uterine catarrh thus have the fungus changed or altered into the *oidium albicans*, hence ulceration of the mouth, stomach, uterus, vagina.

Artificial cultures prove the same thing; the fungus, after repeated cultures on and on, becomes spherical or cylindrical, taking on another type in the series of evolution.

The yeast fungi is easily sterilized and completely annihilated in the stomach in the presence of peroxide of hydrogen, sulphide of lime, ozone water; in the bowels by the ozonized Virginia stone crop; in the uterus and bladder by the occasional introduction of a thallin, iodol, resorcin, creolin bougie.

The nervous symptoms which accompany dyspepsia are due to the ptomaines excreted by this germ.

Yellow Fever, a Streptococcus, or Fungus.

The microbe or fungus of yellow fever has been found difficult to isolate and cultivate. It is a paludal germ, originating in or on the banks of rivers, spread by maritime commerce over the entire inter-tropical zone of the globe. The mouths of great rivers and along the sea-boards are the sources of the germ, which, when inhaled, modifies, changes, alters, the primary bioplasm into a diseased fungus, giving rise to yellow fever. The diagnosis rests chiefly upon the location, season of the year; all the symptoms of bilious malignant fever, yellow skin and conjunctiva; heavy dark-brown coated tongue, which subsequently becomes red; nausea, vomiting, first of greenish matter, then coffee-ground appearance, later black vomit; symptoms of inflammation of stom-

ach and liver, spleen, kidneys, with intense prostration, acute fatty degeneration of glandular organs.

The symptoms are divided into three stages :

1st. Prominent in this are chills, prostration, fever ; hard, rapid pulse, violent thirst, red face, restless, nausea, vomiting slimy, greenish, coffee-ground matter, cerebral congestion, with pain, eyes red.

2d. Add to the above, gastric disturbance much worse, the tongue heavily coated, dry, cracked, irritability, much vomiting, persistent, of brown mass, coffee-ground flakes, indicate approaching hæmorrhage.

3d. Face very yellow and livid, eyes dull, sunken, nose pinched, or lips, tongue brown or black, intense burning pain in stomach and liver, spleen ; suppression of urine, oppression of chest, difficult breathing, pulse small and tremulous, skin cold, clammy, great prostration, vomit, brown turbid matter, mixed with dark clotty blood.

The most successful remedies ever used, and under which the mortality of this fever is reduced to a cipher, are germicides.

A microscopical examination of the blood shows minute cocci, which occur in chains, distend the capillaries and lymphatics of all the organs enumerated.

There can be no doubt that the microbe is pathogenic of the fever, as it is pre-eminently contagious and infectious.

In the treatment the most rigid sanitary measures must be enforced for fever. The bactericides which have been found of utility are Warburg's tincture and ozone water ; con. tinct. kurchicine and hydrocyanic ; sulphate quinine and gelsemium.

General Measures.—Isolate the patient in upper story room. Keep him quiet, free from light and noise, in a horizontal position. Abundance of fresh, pure air ; sponge the body thrice daily with water acidulated with nitro-muriatic acid. Packs or thick compresses, same water to head, over the stomach, liver, spleen and entire body.

SOME OF OUR NEWER REMEDIES.

Abrus Precatorius.

Jequirity.—Small oval, scarlet seeds, or beans, which grow abundantly in Brazil.

Physiological Action.—The impalpable powder, infusion, cerate possess peculiar bactericide properties, which cause the mucous membrane at the part to which it is applied to peel, or shell, or exfoliate, leaving the parts underneath in their pristine vigor; inimical to all microbes

Preparations.—The seeds or beans reduced to an impalpable powder, charged with peroxide of hydrogen, may be applied in all cases of uterine ulcer, abrasion, excoriation, polypoid excrescence, or to similar rectal states, causing in all cases a complete shedding or peeling off of morbid tissue. It can be applied in any form—capsules, powder, suppository or cerate. One application, if thorough, may be sufficient, if not it can be repeated.

Infusion of the seeds only admissible in granular ophthalmia, opacities of the cornea, and in some varieties of cataract. The infusion is usually made by crushing or coarsely grinding one drachm by weight of the beans, added to one pint of boiling water. After careful filtration a few drops can be dropped or injected into the inner canthus of the eye two or three times a day, until complete exfoliation takes place.

Ozonized distillation of the jequirity applied either by painting it on, or by a cold or steam atomizer, instantly annihilates the false membrane (the aggregation of germs) in diphtheria.

Abrin, the active principle, calls for extreme caution in its use.

The powder added to petroleum ointment in given proportions, is of great efficacy as a microbicide in all vegetable and parasite skin affections.

Absinthium.—Wormwood, leaves, and tops of *artemisia absinthium*.

Properties.—Tonic, antispasmodic, anthelmintic. Useful in dyspepsia, gout, dropsy; enemata of a decoction of utility in ascariides.

Acalypha Indica.—A decided stimulant to the pulmonary organs, hence of utility in asthma, bronchitis, and lung conges-

tion; should be administered in small doses frequently repeated until relief is afforded.

Acer Pennsylvanica.—Striped Maple: A decoction of the bark is of great efficiency in cutaneous diseases.

Acetanilide.—Dose: One-half grain every three hours, very uncertain, dangerous; cannot be recommended, as little by little it robs the blood of certain principles indispensable to calorification; thus a progressive refrigerant, which is incompatible with life.

Alarming cyanosis is apt to follow its exhibition; induces muscle failure of the heart.

Acetum.—Vinegar, a dilute solution of acetic acid. A bactericide of value in putrid sore throat; a lotion in burns, sprains, bruises; an eye lotion where lime has got into the eye; of value as a dietetic agent, and for bathing: exciting the normal alkaline secretions of the body. Dose one drachm to four.

Achillea.—Yarrow. Whether it be used in decoction, fluid extract or tincture, acts as a sedative to all the genito-urinary organs. It is specially adapted to uterine derangements, as atonic amenorrhea, dysmenorrhea, leucorrhea.

The *dose* of the tincture or fluid extract is from a few drops up to half a drachm, added to warm water and repeated.

The Yarrow Oil.—Prepared in the same manner as mullein oil, by polarized sunlight and peroxide of hydrogen, is even more efficacious than the tincture or fluid extract.

Very useful in flatulent colic and nervous irritability. With aconite it is of great efficacy in suppression of the lochia and in the eruptive fevers with a tardy rash. (It gives the germs a determination to the surface by opening the pores of the skin and removing obstructions.) Its antiseptic properties are best exhibited as a dressing to wounds, destroying the bacteria, promoting primary union.

Acid Acetum.—Excellent to destroy the microbe of worms, warts. A substitute for acidum aceticum camphoratum, or aromatic spirits of vinegar is, thus prepared: Glacial acetic acid, four ounces; oil of cloves, 15 drops; oil of rose geranium, 90 drops. Mix.

Acid Benzoic.—An excellent germicide. Dose, 30 grains in chronic cystitis, diphtheria, and other microbial diseases.

Acidum Carbolie.—A powerful bactericide, paralytic to the respiratory centres and heart; large doses cause embolism of blood; used in all cases with great care.

Acidum Chromic.—Chromic acid. Explodes in contact with alcohol, glycerine. Excellent to destroy warts, piles; its use requires great care, and never to large areas. 5 to 10 grains to the ounce of water for painting on ulcers; saturated solutions highly dangerous, its absorption into the blood gives rise to inflammation of liver and stomach, and speedy death.

Acid Lactic.—Dose of the dilute acid, a few drops added to

water for dyspepsia, diarrhea, cholera infantum; destroys microbe of croup. The C. P. acid is excellent for brushing over cancerous infiltrations of neck of uterus.

Aconite.

(*Folia et Radix.*)

A mother tincture of either the leaves or the root, very valuable as a cerebral and arterial sedative in all fevers and inflammations, especially if the heart be weak, and there be obstruction to the circulation of the blood.

Dose.—5 to 10 drops to 4 ounces of water, a teaspoonful of this dilution every hour, or more frequent, till the skin becomes moist and temperature lowers.

Adiantum Pedatum. Maiden hair. Used chiefly in infusion in disorders of the respiratory organs.

Adonis Vernalis.

A perennial herb growing in the mountainous regions of Germany, which yields a glucoside or active principle *adonidin*.

Preparation.—Make a hydro alcoholic tincture of the plant (with alcohol 50 per cent.), then precipitate by adding acetate of lead, decant and evaporate the clear liquid to syrup. Then add ammonia, until alkaline, then add a solution of tannin until a precipitate is no longer thrown down. The precipitate is then washed and subsequently decomposed by the oxide of zinc in the presence of alcohol, the alcohol is subsequently evaporated, and the coloring matter precipitated by ether. Adonidin is obtained in a pure state by evaporation.

Description.—Adonidin is non-nitrogenous, colorless, odorless, amorphous and very bitter, soluble in alcohol, slightly so in either water or ether.

Therapeutic Action.—Stiffens up the heart action in all cases of nervous insufficiency—cardiac failure. Dose, one-thirtieth of a grain triturated in sacchar. lac.

Adrue.—Dose of the fluid extract 10 to 30 drops, valuable in atonic dyspepsia and as an anti-emetic.

Æsculus

Hippocastaneum.

Horse chestnut. Excellent bactericide, pulverized nuts as a snuff are of great utility in nasal catarrh. An ethereal extract excellent topical remedy in rheumatism.

Æsculin, or glucoside, in 15 grain doses, equal to quinine in malarial fevers.

An ointment very efficacious in piles. Fluid extract valuable in hepatic affections.

Ether. Sulphuric ether, 74 per cent. ethyl oxide;

Æther. 26 of alcohol containing a little water. Stronger

ether used for anæsthetic purposes contains 94 per cent. of ethyl oxide and 6 per cent. of alcohol. Sometimes ad-

ministered internally for colic in 20 drop doses in capsules, or floating on ice water.

Agaricus laricis, white polyporus.

Agaric. Of utility in exhausting night sweats.

Preparations.—The powder is light, bulky, not much used. Dose, 3 to 30 grains; a fluid extract and tincture are made, but the active principle, agaricine, is in general use, in doses of one-twelfth of a grain; and repeated at suitable intervals.

If agaricine acts on the bowels it should be combined with Dover's powder as follows: Agaricin, 8 grains; Dover's powder, 116 grains; althaea powder, 60 grains. Mix. To be made into 100 pills with mucilage. Dose, 1 to 2 at bedtime.

A mother tincture in doses of from 5 to 10

Agrimonia. added to water every 3 hours, is of value as a tonic to the urinary organs, especially in catarrhal states of the bladder and urethra.

Ailanthus Glandulosa.—A tree which grows in all tropical countries, of which there are two varieties, one fragrant, the other fetid. The bark of the root and stem of the fragrant variety is chiefly used.

Therapeutical uses.—Being a powerful microbicide and parasiticide, it has a most extensive range of action. When administered, it completely annihilates the micrococcus of diarrhea and dysentery, and kills all intestinal parasites, even antidotes poisons; useful as a tonic in asthma, epilepsy.

Preparations and dose.—The succus or juice is the most active, if it can be procured; a teaspoonful in a teacupful of hot water, every morning, gives prompt results. Mother tincture is next best, in doses of from a half to one teaspoonful, thrice daily, added to warm water.

Albumen.—White of uncooked eggs, of utility when either the bronchial or intestinal mucous membrane has suffered a partial death.

Alcohol.—Alcohol, 91 per cent. of ethyl alcohol and 9 per cent. of water. Dilute alcohol contains 54 per cent. of water. A product of fermentation of saccharine solutions by means of a microscopic germ, the *torula cerevisia*, and obtained from vinous liquors by distillation. A powerful diffusive stimulant, and an arrester of tissue waste. Its continued use, day by day, congeals the albuminoid elements of the brain and induces atrophy. Its effects on married adults, most disastrous in producing cerebral disease in their offspring.

The root of the *aleteris farinosa*, or

Aleteris Farinosa. star-grass, is a uterine tonic and restorative, and of unexcelled value in amenorrhea, dysmenorrhea and menorrhagia, intrauterine catarrh, sterility, ulceration of neck of uterus; prevents miscarriage, ren-

ders labor painless, mitigates all the suffering at change of life. It is a remedy of priceless value to all ladies whose uterine system is dilapidated, and at the climacteric period of life.

Preparation and doses.—A wine, prepared from the recently coarsely ground root is the most eligible and definite preparation, in doses of one or two tablespoonfuls every three hours, or as indicated.

All other preparations are worthless.

Alisma Plantago.—Water Plantain. Germicide; leaves discuss swellings. Fl. extract of the root is useful in epilepsy, chorea, hydrophia.

Alnus Rubra.—The bark of the tag-alder is tonic, alterative, bactericide; useful in sterilizing the bacillus of syphilis, tubercle, cancer.

Best preparation, fluid extract in doses of from a half to one teaspoonful every four hours.

Alstonia Constricta.—A tree which grows in New South Wales.

It contains four alkaloids,—alstonine, alstonidine, porphyrine, and porphyrosine.

Physiological Action.—A powerful stimulant to the great sympathetic nerve-centres, a cerebro-spinal stimulant and tonic.

Uses.—Of remarkable utility in cardiac failure, in small doses frequently repeated.

Alstonia Scholaris.—The bark of a handsome forest tree, growing abundantly in British India.

It contains an alkaloid, ditamine, a white, flocculent, amorphous precipitate, which is freely soluble in ether, chloroform, benzoin, or alcohol.

Therapeutic uses.—Dita bark is an energetic bactericide, parasiticide, astringent, tonic, hence of great efficacy as a microbicide in diarrhea, dysentery, typhoid and exhausting diseases generally.

Preparation and doses.—Powdered bark, 3 to 5 grains in pill.

Infusion made by macerating half an ounce of the ground bark in ten ounces of boiling water, and straining. Dose, 1 to 2 ounces several times a day.

Tincture.—Two and a half ounces of the coarsely-ground bark macerated in one pint and a half of alcohol for fourteen days, then percolated. Dose, from 30 to 60 drops.

Ditaine is used thus: Ditaine, 30 grains; syrup of citric acid and syr. aurantii, of each 2½ ounces. Mix. Dose, one teaspoonful every hour.

Alveloz.—The milky juice of a euphorbiaceous plant growing in Pernambuco, has strong, irritant, and caustic properties, used by ignorant empirics in burning cancers.

Alumen.—Alum, astringent and bactericide. Useful in painter's colic, ophthalmia, leucorrhœa, etc.

Two drachms of alum boiled in a pint of milk, strained, excellent eye wash. White of egg beat up in alum till it coagulates, a good remedy in inflammation of the eye.

Various preserving fluids are made with alum; used by bakers to whiten their bread; it destroys the phosphates in the flour, hence the increase of rickets and premature loss of teeth from eating bakers' bread; burnt alum useful to destroy exuberant granulations. The sulphate powerfully antiseptic and astringent.

Aluminum (Aceto-Tartarate).—Dose: Local; a teaspoonful of a fifty per cent. solution to teaspoonful of water once and repeat. An antiseptic of great value, and the remedy occupies a prominent position in the cure of ozæna. A weak solution for syringing the nose. Its action is rapid and safe. In laryngeal phthisis it may be used by a vaporizer with great success.

Aluminum Solution of Acetate.—Local use; applied daily or more frequently. A three per cent. solution of the acetate of alumina is a powerful germicide and disinfectant. It is greatly to be preferred to any other agent in surgical practice as it is efficient and free from all objections. It is inodorous, and it should be diluted with from two to five times its volume of water when used as an injection or by irrigation. It promptly destroys all disease germs on foul or gangrenous sores, and is one of the best antiseptic injections in puerperal septicæmia. Useful in some skin affections.

Ammonia Gum.—Gum ammoniac, partly soluble in water, alcohol, vinegar, and alkaline solutions.

The transparent alkaline solution becomes milky on adding water. It is a stimulating expectorant, useful in catarrh, asthma, bronchitis.

Ammonia.—A diffusible stimulant, an alkaline germicide. The most popular preparations are:—

Ammonia Benzoas.—Soluble in water; gouty affections. Dose, 10 to 30 grs.

Ammonia Bromide.—Like bromide of potass; epilepsy. Dose, 15 to 30 grains.

Ammonia Carbonate.—Soluble in water, alcohol, glycerine. boiling water decomposes it. Dose, 5 grains every two hours; in debility smelling salts are prepared from the carbonate, to which is added aqua ammonia saturated with oil of lavender, cloves, bergamot.

Ammonia Chloride.—Being a stimulant, diuretic and expectorant, it is of great utility in bronchitis, pneumonia, and diseases of the liver; externally useful in tumors, bruises. Dose, 5 to 10 grains internally. Its fumes are valuable in catarrh; the muriate combines well with chloride of sodium and nitrate of potass in water, forms a splendid application to swellings; other preparations as the phosphate, sulphate, iodide, of utility.

Ampelopsis Quinquefolia.—The bark of the root, vine and twigs of the American ivy, possesses strong germicidal properties, and destroys the microbes of tubercle, syphilis.

Preparation and dose.—Fluid ext. in doses of from 30 to 60 drops.

Amyl Nitrite.— $C_{10}H_{12}O_2O_3$, a pale amber-colored liquid, specific gravity .677; boils about $96^{\circ}F.$; soluble in alcohol, ether and chloroform.

Physiological action.—Whether it be inhaled or used hypodermically, or administered orally in medicinal doses; the very instant it reaches the blood and nervous system, it stimulates the ganglionic nervous tracts; increases the heart's action.

Therapeutic uses.—Of great efficacy in cardiac neuralgia, affording instant relief in that terrible heart pang; been found of utility in asthma, colic, collapse, hour-glass contraction, seasickness, headache.

Dose, Mode of administration.—By inhalation, glass pearls, ruptured in a handkerchief, containing 5 to 10 drops. Those can be procured ready for use.

Hypodermic injection, ten drops of a 10 per cent. solution may be used.

Internally: Nitrite amyl, 36 drops; alcohol, 6 drachms; glycerine, one and a half ounces. Mix. Dose, one teaspoonful as indicated, but taken slowly.

Andromeda Leschenautica.—D. C. This plant by distillation yields an essential oil, which is chemically identical with methyl-salicylic acid, from which the purest carbolic and salicylic acid can be prepared.

Therapeutical properties.—The oil itself is a powerful bactericide, aromatic stimulant, anti-spasmodic, of efficacy in all cases in which these acids are prescribed.

Anemone Pulsatilla.—Anemin, a glucoside $C_{15}H_{20}O_7$, a crystalline substance obtained by distilling plant with water, and separating it from anemonic acid by means of boiling alcohol.

Physiological action.—Diminishes the reflex impressibility of the medulla oblongata and spinal cord, thus subdues neuroses reflex in origin; larger doses irritate the digestive tract; smaller doses sedative to genito-urinary organs.

Therapeutical uses.—Of immense value in sexual neurasthenia of both sexes, as in spermatorrhea, prostatic and testicular irritation; ovarian and uterine hyperemia, also in all neuroses of the generative organs, as well as in active inflammation of the same; amenorrhea, dysmenorrhea, menorrhagia, leucorrhoea, in ophthalmia, and general catarrhal conditions.

Preparations and doses.—The mother tincture is prepared from one part of the whole herb to eight of alcohol 96. Dose, 5 to 10 drops every three to four hours, added to water.

The extract, 1 to 2 drops as frequent; solid extract, 1 grain daily in divided doses.

Lotion, 2 drachms of tincture to 4 ounces of tepid water.

Anemonin, used in $\frac{1}{4}$ to 1 grain doses, in asthma, bronchitis, whooping-cough.

Antifebrin, or Acetonilide.—A derivative of aniline. It is in the form of a white crystalline powder, soluble in 180 parts of cold water (42.8° F.), more readily soluble in alcohol. The dose is 5 to 30 grains per day. Its effects are manifested in an hour, and fully developed in 4 hours. It has antipyretic powers which are said to be exerted more promptly and from smaller doses than is the case with antipyrin.

Antipyrin.—A white, crystalline powder, prepared synthetically from certain constituents of coal-tar. Soluble in water, in less than an equal weight, and freely soluble in alcohol and chloroform. It is said to lower the temperature of fever patients from $3\frac{1}{2}$ to $5\frac{1}{2}$ ° F., and produce a refreshing sleep for 5 or 6 hours, by administering 15 grains at 9 P.M., and $7\frac{1}{2}$ grains, each, at 10 and 11 P.M., dissolved in water or wine when taken. As much as 75 grains have been given in three divided doses, proportioned as above. The following mixture has been of utility in typhoid fever: Antipyrin 20; Jamaica rum 30; water 150; and syrup 150 parts: dose, a teaspoonful three times a day. The dose for children is from 1 to $1\frac{1}{2}$ grains, for each year of a child's age. Incompatible with spirit of nitrous ether.

Antifebrin and antipyrin are powerful poisons, cardiac depressants, and lower temperature by inducing muscle failure of the heart, which is generally permanent.

From the most ancient times *matricaria* has been justly esteemed as a tonic to nearly all debilitated conditions of the alimentary canal.

Preparations and doses.—Infusion, fluid and solid extract are used, but the comp. tinct. of *matricaria* ozonized which is prepared from *anthemis*, *nux*, *ignatia*, *cinchona*, *gentian*, *columbo* and peroxide of hydrogen, is in very general favor, in doses of 10 drops added to water, thrice daily.

It is indicated in all anæmic states of the brain, and great sympathetic, as in neurasthenia, paralysis, brain softening, and atrophy; impaired intellect, imperfect memory, vertigo, faintness, disinclination for mental or physical exertion, numbness, headache, even in structural lesions, weakness, anorexia.

It is specially indicated when the eighth pair of nerves, the vagus and pneumogastric are much weakened, as in indigestion, pains in the stomach, fullness, flatulence, eructations, constipation, jaundice, with an inactive, sluggish liver, where the bile products commingle with the blood, poisoning the brain; in gall stones—a general unstrung condition, incidental to care, worry, or to the use of tobacco, opium, whiskey, chloral habits, antidotes, in-

somnia. Has a marvellous tonic action upon the heart and lungs.

Careful analysis of this compound shows
Antikamnia. it to consist of about 90 per cent. of acetanilide and 10 per cent. of bicarbonate of soda—thoroughly triturated together.

The addition of the soda to the acetanilide makes it very soluble, easy of absorption and prompt in action.

Like all coal-tar derivatives, it induces muscle failure of the heart, it is a dangerous toxic agent, causing death by paralysis of the heart; hence the cyanosis.

A greenish brown oily fluid, obtained by exhausting the seeds of the common garden parsley with alcohol; shaking the tincture with animal charcoal and soap, making it an extract, which is then treated with ether to remove apiene. The ethereal solution is then evaporated, residuum mixed with $\frac{1}{8}$ of its weight of litharge to remove fatty matter or oil. The mixture allowed to stand 24 hours, and then filtered through a thin layer of animal charcoal.

Physiological action.—A stimulant, vitalizer to the generative organs of both sexes. More especially in uterine atrophy or inertia with amenorrhea.

Preparation and doses.—A concentrated solution in doses of 10 drops every hour, or 30 drops every three hours, added to water is effectual in amenorrhea.

Apocynum Cannabinum.

(*The root of the American Hemp.*)

Physiological Action.—

Has a special vitalizing action on all the serous, mucous, and synovial mem-

branes of the body—as well as upon the walls of blood vessels and nerves, hence valuable in rheumatism, neuralgia, etc., but above all it has a most decided action in all cases of dropsy.

Therapeutical action.—Used as a diuretic and hydragogue in all cases of dropsy.

Preparations and dose.—Decoction, fluid extract and tincture. The latter is the best, made of one part of the root to ten of alcohol. Dose, five minims to one drachm, added to water, as indicated. Many physicians prefer the infusion.

This agent contains one molecule of water less than morphia, and is in the form of pale greyish white acicular crystals, soluble in 30 parts of cold or less of warm

water. Turns green on exposure to the air. Treated with perchloride of iron, turns a rose color.

Physiological action.—When administered it first excites, and subsequently retards the reflex excitability of the spinal cord, and slows the action of the heart.

Apomorphia Hydrochlorate.

Therapeutic uses and doses.—Small doses of one-fiftieth of a grain operate as a sedative in asthma, bronchitis; one-quarter to one-tenth of a grain administered internally acts as an emetic; one-thirtieth of a grain infallible in sunstroke; lozenges containing one-fiftieth of a grain excellent in laryngitis.

Araroba, or Goa Powder.—The tree Angeline Amarojose, growing from 80 to 100 feet high, in Brazil, whose heart wood under certain conditions, undergoes a peculiar cellular metamorphosis into what is termed Goa powder, the active principle of which is chrysarobin, forming chrysophanic acid under the influence of moist air and ammonia; a powerful bactericide. This acid is generally used instead of the crude powder.

Therapeutic action.—As an external microbicide in psoriasis, lupus, all forms of tinea, eczema and parasitical cutaneous affections, it is of rare value. It is also administered internally.

Preparations and doses.—From 10 to 20 grains of the acid added to an ounce of ozone ointment is exceedingly valuable.

Internally the dose should be small, $\frac{1}{10}$ of a grain triturated in sugar of milk; larger doses are liable to cause irritation, vomiting, purging.

Arbor Vitæ (Thuja Occidentalis.) Oil and fluid ext., dose from 5 to 30 drops of the former; 30 to 60 drops of the latter, destroys the micrococci of small-pox, and warts; excellent externally for the destruction of simple and venereal warts, also for corns.

Arbutin.
 $C_{24}H_{12}O_{14}H_2O$,

The active principle *arbutin* is obtained from all plants of the order of uva ursi.

It occurs in tufts of long, circular, colorless crystals, which have a bitter taste, soluble in water, alcohol and ether.

Physiological action.—A diuretic and sedative to the entire urinary tract, inimical to the gonococcus.

Therapeutical action.—Of utility in urethritis, etc.

Dose. 6 to 8 grains every 3 hours, dissolved in water.

Arctium Lappa.—The root and seeds of all varieties of burdock are used in medicine. The seeds contain a fixed oil, and an inert resinous substance, insoluble in water.

Therapeutic action, has tonic, alterative and microbicide properties, which render its use of great efficacy in chronic hepatic affections, psoriasis inveterata, dyspepsia in the nerve storms of epilepsy and chorea.

Preparation.—Dilute alcohol extracts all the medicinal properties of both root and seeds, consequently a fluid extract is most eligible. The seeds alone, coarsely ground, macerated in alcohol in the proportion of 2 oz. to 20.

Dose.—A tablespoonful three times a day, continued for several weeks or months.

Arenaria Rubra. A branching plant with spreading stem, of 5 to 8 inches high, which grows luxuriously on the sandy shores of Algeria.

Chemistry.—The dried plant has the odor of fresh mown hay, yields to ether chlorophyll a resinoid body which has the odor of benzoine and an alkaloid.

Therapeutic uses.—Of great value in acute and chronic cystitis; catarrh of the bladder and prostate, nephralgia.

Preparations and doses. As it yields its properties readily to water, a decoction is unquestionably the best mode of administration; 30 grains added.

A combination of iodine and thymol, is a valuable, inodorous, and non-toxic bactericide, equal if not superior to iodoform, iodol. Aristol is insoluble in water and glycerine, slightly so in alcohol, but readily so in ether. Soluble in oils by thorough friction without heat. Used like iodoform or iodol, for the cure of chancres, ulcers; by dusting on, excites rapid cicatrization, also excellent in parasitical skin affections.

Asclepias Tuberosa.—The fluid extract in doses of 30 to 60 drops added to warm water, and administered, has a special vitalizing action on all the serous membranes of the body.

Aseptol. This term is applied to a 33½ per cent. solution of orthoxyphenol-sulphonic acid. It has been recommended as a substitute for carbolic and salicylic acids. It possesses their antiseptic properties, and is soluble in water, alcohol and glycerine in all proportions. It is free from the irritant and toxic properties of carbolic acid, and is therefore recommended in extensive surgical operations (opening of the abdominal cavity, etc.) It is not escharotic when applied to delicate tissues. It has antiseptic properties in a solution of 1 in 1,000.

The internal dose is intermediate between carbolic and salicylic acids.

Aspidium Filix-Mas.—The root of the male fern is useful in expelling tape worm.

Preparations and Dose. 8 to 20 drops to be repeated as the case requires.

Aurum Chloride et Soda. Dose: One-thirtieth of a grain triturated in sugar of milk, thrice daily. Destroys the germs of syphilis and cancer. The pure chloride of gold dissolved with nitric acid makes a valuable caustic for lupus.

Best administered in pill form: Sulphate of cinchonidia, grs. ii; chloride of gold, one-thirtieth of a grain. Mix. Given at a dose thrice daily.

Avena Sativa. Crushed or ground Scotchoats yields its *avena* readily to alcohol.

Physiological action.—When administered the *avena* acts as a nutrient tonic and vitalizer to the entire nervous system, increases nerve force, creates a higher, nobler type of being, a deeper strata of intellectual existence; its use deepens the fissures of thought, and is indicated in all forms of nervous disease, as paralysis, softening, insomnia, headache, chronic alcoholism, even in the nerve storms of epilepsy and chorea. It is an excellent bactericide, kills the microbes of neurasthenia and typhoid fever, wipes out atrophic paralysis, causes a rejuvenation of nerve tissue.

Preparations and doses.—There are two methods of preparing the tincture. (1.) The crushed oats barely moistened with water kept at a steady heat of 98° F. until acetous fermentation commences, then incorporate a definite volume of peroxide of hydrogen and add the alcohol, this combination yields *avena* in great abundance, and gives an acetous tincture; whereas the oats (2) submitted to alcohol forms an insipid, inactive tincture, decidedly poor in the active principle.

Doses: Of either from 10 to 20 drops added to water, thrice daily.

A glucoside from the baptisia tinctoria, or
Baptishe. wild indigo weed.

Preparations.—Infusion, fluid and solid extracts, and the active principle.

Therapeutical uses.—An active microbicide, sterilizes, and annihilates disease germs in both the solids and fluids of the body; its range of action is most extensive, wherever bioplasm is changed, dtered, degraded into other living matter, hence its value in ulceration.

Barium Sulphuret.—Mixed with starch; and apply locally once. Hair depilatory.

Chemical, microscopic, and spectroscopic analysis of the various meat extracts show that they all, with one solitary exception, contain bacteria, and other disease germs incidental to their host.

The only extract which is pure, free from all disease germs, and cadaveric alkaloids, is the Cudahy's "Rex" brand from the Cudahy Packing Co., of Omaha, Nebraska. The product is a great improvement upon every other; besides its great purity, its nutritious properties are great, containing nearly 55 per cent. of

combined albuminoids, has a most agreeable flavor, extremely palatable taste, and keeps indefinitely.

This extract of beef is perfect, an excellent remedy in all states of mal-assimilation and imperfect nutrition, supports the vital forces in all exhausting diseases. Its use is indispensable in typhoid, in marasmus, in all infantile disorders.

Belladonna Fl. Ex. Dose: One to two drops added to water every four hours. A remarkable drug. Keeps up fluidity of the blood: arrests the secretion of milk

in the female breast; paralyzes the laryngeal nerves; dilates the pupil; paralyzes all sphincter muscles, as those of the rectum, bladder, uterus, hence invaluable in irritable rectum or bladder, in dysmenorrhea, incontinence of urine, in spasm, brain irritation, fevers; retards or sterilizes disease germs.

The alkaloid atropine in doses: 1-60 to 1-120 of a grain added to water; repeat at long intervals. Of great utility in ophthalmic practice for its mydriatic properties and for the relief of pain. An antidote to morphia and muscarine; valuable in neuralgia, epilepsy, dysmenorrhea, incontinence of urine.

Benzoic Acid.—Dose: Ten grains in syrup thrice daily. Indicated in the uric acid diathesis, or gravel. It combines with nitrogen, derived from nitrogenous substances contained in the blood, which would otherwise go to form uric acid, and is itself converted into hippuric acid, which is rich in oxygen.

Benzoate of Sodium.—Drachm doses in Seltzer water every three hours. Indicated as an antiseptic in erysipelas.

Benzosol.—A granular white powder, inodorous, somewhat aromatic taste, insoluble in water, decomposed by heat, used as a substitute for guaiacol in the destruction of the tubercle bacilli. In the alimentary canal it is decomposed into guaiacol and benzoic acid. It is best administered in capsules. It is of utility in pulmonary tuberculosis, and has a most beneficial influence over nutrition; increases vital force most remarkably, and is a prophylactic against pneumonia.

Betin.—A glucoside from the common garden beet is an active emmenagogue. Dose 3 to 6 grains thrice daily. Best administered in pill form, two or three times a day.

Berberis Aquifolium. A small evergreen shrub growing in California, Utah, Nevada.

The root contains 2.35 per cent. of berberine, 2.82 per cent. of oxyacanthine, with other resinous matter.

Therapeutic uses.—A bactericide of very great power and range, being destructive to the microbes of malarial, typhoid fever; even the bacillus of syphilis succumbs to its influence.

Preparations and doses.—An infusion of the crushed root may be used, two ounces to the pint; wineglassful doses.

The same infusion is of great efficacy as a local application to ulcers of a gangrenous type. A tincture of four ounces of the ground root to one pint of dilute alcohol; dose, 3 to 10 minims. A fluid ext. from 10 to 30 drops every three hours; incompatible with an alkali.

All preparations of the drug are incompatible with the iodide of potass.

Berberine, Hydrochlorate, Sulphate.—Dose: One to three grains before meals. This alkaloid occurs in golden seal, gold thread, yellow root, columbo. Tonic, promotes digestion; stimulates the liver.

The alkaloid, the sulphate of berberine, indicated in the same class of diseases in doses of from 1 to 10 grains.

Betol.—Dose: Ten to 15 grains every three hours. Betol, like salol, is indicated in rheumatism. When taken into the stomach it divides up into salicylate acid and naphthol. No odor, no taste, special action when lactic acid attacks the sheaths of nerves.

Betol Oil.—Dose: One drop to 250 of water, used as a gargle, or in the fever of fever every three hours. Indicated in catarrhal affections of the larynx, in diphtheria.

Bismuth (Salicylate).—Dose: Five to ten grains every three hours. Useful in chronic diarrhea; the flux of typhoid and dysentery; it sterilizes the micro-organisms.

Bismuth (Sub-Iodide).—Dose: Sprinkled on ulcers as indicated. The sub-iodide of bismuth contains, in every three grains of the salt, one grain of iodine. It is very highly recommended as a dressing for ulcers, and in various inflammations of mucous membrane.

Black Haw, Fl. Ext.—Dose: Thirty to sixty drops every three hours. A most invaluable remedy as a great uterine restorative and vitalizer.

The leaves of *boldus fragrans*, a tree growing

Boldo. luxuriously in Chili.

Therapeutical uses.—Possesses excellent germicide properties, valuable in rheumatism, dyspepsia, fevers; tonic and stimulant to the heart, liver, kidneys. A powerful hypnotic; of special benefit in the sleeplessness of the insane, in whom it produces sound, refreshing sleep. There is an entire absence of anæsthesia in its use; less carbonic acid is exhaled than when awake; the brain is less full of blood than during waking hours, and in certain forms of insanity this is an invaluable drug.

Preparation and doses.—Fl. ext.; dose, 1 to 10 minims; tincture, from 5 to 30 drops, added to water.

Glucoside Boldine.—Dose: 2, 4, 6 grains, every four hours.

Obtained by the action of sulphuric acid on borax. Occurs in white, pearly crystals; soluble in 26 parts of cold water; 1 in 60 of alcohol, and in 5 of glycerine.

Boracic Acid. (*Boroglyceride*.) *Therapeutical uses and action.*—A mild but efficient bactericide, and arrester of chemical change. Best administered and applied in the form of boroglyceride. It makes an unexcelled lotion in ophthalmia, nasal and vaginal catarrh, by killing all microbes,—the factor of disease; in cases of aphthæ, its application wipes out the *oidium albicans*. It checks disease-germ evolution in the stomach. As an application to burns, erysipelas, chilblains, wounds, etc., it is unexcelled. The ozonized boroglyceride is one of the most valuable germicides in the *Materia Medica*. Owing to its hygroscopic nature it should be carefully excluded from the air. As a wash, or lotion, in erysipelas, puerperal states, ophthalmia, venereal sores, it has no equal, as it destroys the bacteria and all microbes.

Packing the vagina in cases of mechanical dysmenorrhea and sterility with the boroglyceride paste has effected wonderful results.

It has more recently been employed as a preservative for meat, fish and milk, keeping those edibles in an excellent state of preservation for weeks, in the hottest weather, without the aid of ice. Various preparations in medicinal use are the paste, oil, pastilles.

This remedy has long been known as an anæsthetic, but more recently it has come into very general notice as a germicide for the sterilizing and complete destruction of the mycelia of whooping-cough, for which disease-germ it has a special affinity, and most acceptable to children on account of its pleasant taste. Its administration in pertussis causes instantaneous death to the germ—its action is thus prompt—the child at once rallying from the attack.

Dose: One to 3 drops, according to age, added to a little water, every three hours. The remedy should be administered for one or two weeks, so as to be sure the last spore is killed.

Brucine.—*Dose:* One-twentieth of a grain every four hours. Stimulant to the spinal cord, nerves of nutrition. Excellent in sexual debility.

Brucine, C. P.—*Dose:* One-fiftieth to one-hundredth of a grain every three hours. Spinal stimulant; invaluable in spinal paralysis.

The roots of *bryonia diöica* and *bryonia alba*, which grows in Germany and other parts of Europe.

Therapeutic uses.—Indicated in all irritated or depressed states of the serous or synovial membranes, as in pleurisy, pleuropneumonia, rheumatism, peritonitis, whooping-cough.

Physiological action.—It reduces blood-pressure, depresses heart's action, although it stimulates white, fibrous tissue.

Preparation and Doses.—A tincture is the most eligible form. Ten drops to 4 ounces of water. Mix. A teaspoonful as indicated.

Bryonin.—Dose: One-tenth to one-twentieth of a grain every four hours. Valuable in rheumatism; a stimulant to the white, fibrous tissues of the body, and also in dropsies.

Burdock Seed.—Dose: Fluid extract of the seed, 10 to 30 drops, thrice daily. An invaluable alterative in chronic skin affections; improves secretion, nutrition, and assimilation; has been of efficacy in chorea and epilepsy.

Buchu.—The fluid extract, in doses of from 30 to 60 drops, has a special action in eliminating water from the body.

A plant, native of Hindostan, all parts of it, but especially the leaves, are diuretic, demulcent, and antispasmodic, and are of some value in dysuria, colic, gonorrhea, and irritation of the urinary organs.

It is of no utility in either diurnal or nocturnal emissions; resembles cleavers; not by any means equal to uva ursi.

Usually administered in infusion.

Bursa Pastoris (*Shepherd's Purse*).—The juice of the fresh herb is, beyond all dispute, as reliable and efficacious a styptic as the perchloride of iron, or any preparation of ergot.

A saturated tincture, prepared from the root, leaves, flowers, of the night blooming cereus. Dose, from a few drops to 20 or 30, added to water; administered every 3 hours; of utility as a tonic in heart failure. In sexual exhaustion it gives speedy relief, for it strengthens the cardiac plexus of the sympathetic, and improves cardiac nutrition.

The glucoside, in one-fiftieth to one-hundredth of a grain in pill form is the most reliable form in which to administer this remedy.

Cadmium (*Sulphate*).—Dose: From one-half to five grains to an ounce of water; locally, every three hours. Whenever lymph has been effused, and we are desirous of absorbing it, as in opacities of the cornea, chronic ulcers, indurated glands, stiff joints; not so efficacious as the clay.

The iodide of cadmium possesses the same properties.

Caffeine Citrate.—Dose: One to two grains every three hours, or more frequent. This remedy is indicated in all forms of headache or neuralgia; of the greatest efficacy in all organic affections of the heart, with imperfect compensation; regulates the heart's action; operates well in chronic interstitial nephritis,

with œdema and difficult breathing, as a diuretic an antidote to opium poisoning, and appeases the appetite for stimulants.

Calabar Bean. Fl. Ext.—Dose: Two to three drops in water every three hours. Indicated in tetanus, puerperal convulsions, epilepsy, chorea, asthma, nervous disease.

Calcium (Hippurate).—Dose: Five to 10 grains, triturate in sugar of milk; every three hours. Of great efficacy in the uric-acid diathesis, and invaluable in all cases of disordered nutrition of stomach, liver and bowels.

Calcium Sulphide.—Dose: One teaspoonful in milk every four hours. Effects a cure with economy, certainty, and rapidity, in parasite skin affections. It is prepared as follows: Flowers of sulphur, 100 parts; quicklime, 200 parts; water, 1000 parts. Boil for three hours, then filter.

California Laurel.—Fl. ext., from 10 to 30 drops. Of utility in epilepsy, chorea, nervous headache, cerebro-spinal irritation, neuralgia, atonic diarrhea, colic.

Carbonate of Lime.—Dose: Ten to 30 grains added to milk every three hours. An antidote to the germs of variola and cancer. When administered persistently, arrests their growth and development.

Carbon Bi-sulphide.—Dose: Used externally; local or anæsthetic. The vapor is used in nervous deafness, neuralgia, in gastric catarrh.

Fresh leaves and flowers of the common

Calendula. garden marigold.

Therapeutical uses.—Microbicide, nerve-stimulant, in cuts, wounds, bruises; hastens cicatrization, and wipes out ecchymosis; valuable in nervous inertia and hepatic torpor.

Preparations.—A tincture from the fresh herb, obtained by covering a given quantity with alcohol 45 per cent., permitting it to macerate four weeks. Then percolate. When about to apply it, should be diluted one half water.

Columbo.—American columbo, a useful, mild tonic. Infusion and fluid extract.

Camphor.—This gum is a bactericide, soluble in alcohol. Besides its germicide properties, it is narcotic, diaphoretic, sedative, anodyne, wide range of action.

Indian Hemp yields its properties to alcohol,
Cannabis. from which two staple glucosides, *Cannabinine* and *Cannabinine hydrate*, are isolated.

Therapeutical uses.—Excellent hypnotic. Relieves irritation of the urinary organs, cystitis, gonorrhea. Allays cerebral disturbance.

Preparations and uses.—A tincture is never reliable. Administered in 1 to 10 drop doses added to water.

The tannate of Cannabine is definite in its action. Most reliable. One-eighth of a grain doses.

The stems of *Ephedra bifurca*, which is **Canutillo**, indigenous.

Therapeutical uses.—Being an active germicide, it is valuable in gonorrhea, leucorrhea, relaxed and germ-laden states of the genito-urinary organs.

The fluid extract in half or one teaspoonful doses is the best form for general use.

Capsicum Annuum.—A powerful, diffusible stimulant, beneficially used in rheumatism, paralysis, sciatica. One drachm of the oil to four ounces of alcohol; makes a good liniment.

The compound tincture frequently repeated in doses of one teaspoonful in hot tea.

Carbo.—Carbon, antiseptic, useful in dyspepsia.

Dose: Five grains, added to some **Carbon Chlorate**. alterative syrup or water, every three hours. Specially indicated in cancer, syphilis, tuberculæ, all fevers, and whenever there are disease germs in the human blood. This remedy has acquired a world-wide reputation in the cure of cancer. Its high repute is well merited. It is introduced into the ozonized saxifraga and phytolacca, to render those invaluable alteratives most extremely efficacious as a germicide in the radical cure of all morbid states of the blood. Locally, it can be introduced into all cancer plasters, being compatible with extracts of sheep sorrel and red clover tips, with bichloride of mercury, arsenic, chloride of zinc plasters, and the chloride of chromium, ozonized.

Cardol,
 $C_{42}H_{31}O_4$

A yellow oily liquid; insoluble in water, but freely soluble in alcohol and ether, non-volatile, obtained by means of ether from the shell of the cashoo nut.

Physiological action.—A powerful bactericide and vesicant to the skin.

Therapeutic uses.—Chiefly used as an external to destroy the bacillus of leprosy on the skin. A tincture is made 1 part to 10 of alcohol. Dose 2 to 10 drops, thrice daily.

Carnauba.—Dose of the fluid extract 10 to 60 drops, has feeble alterative properties.

The leaves of *Jacaranda Caroba*, a Brazilian **Caroba** tree.

Therapeutical uses.—Specially indicated in syphilis as a bactericide, fully as effectual as the bichloride of mercury in annihilating that bacillus, whether it be on mucous membrane, skin or bone.

Preparations.—A simple decoction of the leaves will destroy the initial lesion, as well as the eruption upon the skin. The fluid extract is best for internal administration. Doses, from a few drops up to 60, thrice daily.

Cascara Amaga.—A bactericide used chiefly for the destruction of the venereal bacillus.

The fluid extract in doses of from 30 to 60 drops.

Casca. The bark of the erythrophlœm of a leguminous tree growing in Guinea, contains an alkaloid, erythrophlocine.

Therapeutical uses and action.—The powdered bark inhaled causes very violent sneezing, but taken internally in the form of a tincture, it has a remarkable stiffening action upon the heart, resembling digitalis. Same doses as tincture of digitalis.

Cascara Sagrada. The bark of a small tree indigenous to the Pacific Coast.

Chemistry.—Contains red and light yellow resins, tannic, oxalic and malic acids, some starch and a crystallizable alkaloid.

Physiological action.—Stimulates the pneumogastric and vagus, and motor cells and ganglia of the sympathetic which supplies the intestinal tract, aids the general process of digestion.

Therapeutical action.—Useful in habitual constipation of the alimentary canal, in hepatic torpor and deficiency of intestinal secretion, in an abrogation of the peristaltic wave.

Preparations and doses.—A decoction is used, half an ounce of the ground bark to 2 pint of water; fluid extract from 10 to 30 drops; a lozenge in which the bitter principle is isolated, excellent form, two after each meal. Other preparations are worthless.

Castana Vesca. The leaves of the Spanish chestnut.

Therapeutical uses.—A germicide, destroys the germs of whooping-cough and bronchial catarrh. Produces copious expectoration.

Preparations and doses.—Decoction, 2 ounces to 1 pint of boiling water, administer freely; fluid extract 10 to 30 drops, repeated as indicated.

Cineraria Maritima. The juice or milk of this plant is deemed of importance in opacity of the crystalline lens.

We obtained from Venezuela some of this juice taken from the bush before the flowers commenced to bud, dropped two drops in numerous cataract eyes, with no result but an aggravation of all the symptoms.

Caulophyllum. The root of the blue cohosh, grows freely all over our country.

Therapeutic action.—Emmenagogue, diuretic, diaphoretic, antispasmodic; an excellent uterine stimulant.

Preparations and doses.—As it freely yields its properties to boiling water, an infusion is most efficient, 2 ounces of the ground root to a pint of water. Dose: wineglassful every 2 or 3 hours in suppression of the menses. A fl. ext., also good. Dose, from 10 to 30 drops, added to water.

The glucoside caulophylline. Dose 1 to 3 grains.

Cedron Seeds.—This is used in the preparation of the sima-bidia which is so valuable in neuralgias, snake-bite, rabies. Dose a teaspoonful, repeated at short intervals.

Cerasus Virginian.—Choke cherry.

Therapeutical indications.—In debility, indigestion, chronic diarrhea, dysentery, epilepsy, spleen enlargement, due to malaria,

Preparations and doses.—Fl. extract 30 to 60 drops every 3 hours.

Cerebrin.—Dose: One to five grains at meals thrice daily. Cerebrin is a soft, light amorphous hygroscopic powder—isolated from the white substance of the brain. As it is liable to chemical change, it is best administered in the glycerite of kepheline or phosphated tincture of oats.

Cerii Oxalate.—Best administered in the form of liq. cerii, of great efficacy in gastralgia, vomiting of pregnancy.

Oil prepared from the seeds of gynocardia odorata, contains an active principle, gynocardiic acid. The oil is obtained by cold or hot compression.

Therapeutic uses.—A powerful bactericide, completely annihilates the bacillus of leprosy, tubercle, syphilis, lupus, psoriasis, rheumatism.

Preparations and doses.—The oil may be administered internally in hot milk, or in capsules in from five to ten drop doses: applied externally in a pure state, or incorporated in an ointment in the proportion of one ounce of the oil to three of ointment.

An evergreen shrub indigenous to Chili; very like our common myrtle, called sometimes myrtus chekan or cheykan.

Chekan. *Therapeutic uses.*—Germicide in the highest degree, tonic, expectorant, diuretic. It is extremely useful in catarrh of the bronchi, bladder, uterus—in all relaxed, germ-smitten mucous membranes.

Preparations and doses.—Infusions are used: two parts of the leaves to 16 of water; good for inhalation and injections.

The fluid extract in doses of from 30 to 60 drops or even larger. The following is an excellent form for administration:

Fluid extract collinsonia, chekan, half an ounce of each ; syrup, four ounces. Mix. Dose, teaspoonful.

Chelona Glabra.—Balmony, is germicide, vermifuge.

Dose.—Fluid extract in 30 to 60 drop doses every three hours.

Chewstick.—Fluid extract of the bark 30 to 60 drops every four hours—a grateful aromatic—makes an elegant mouth wash.

Chian Turpentine Mistura.

(*Highly Ozonized.*)

By the introduction into this compound of the ethereal peroxide of hydrogen, we obtain it in a form less liable to

irritate the stomach, more easily absorbed, and its germicidal properties increased at least 500 per cent.

Chian turpentine, which we use, is specially collected for us in the island of Chio, from the pistacea terebintha.

This, as we have prepared it, is an energetic ozone producer, an agreeable aromatic, with an odor resembling the pinaceous turpentine.

Its special action, when administered, passed into the blood-tissues, is to search out the cancer germ, which it surely finds, and slowly, silently kills it. Under its use pain ceases, the tumor, or aggregation of germs, with it also dies. If there is an open breeding, eating surface it becomes covered with a characteristic grayish slough, indicating a perfect annihilation of the cancerous microbe. Tumors also dwindle and atrophy under its use.

Dose : One teaspoonful of the Chian turpentine mistura, three times a day, which is to be gradually increased to 9 teaspoonfuls in the twenty-four hours.

Chionanthus Virginica.

The root bark of this plant, known as the fringe-tree or snow-flower.

Therapeutical uses.—The cholagogue properties of this plant have been thoroughly investigated, and are greater than any of the mercurial preparations, hence it is of great efficacy in all hepatic affections, torpidity of the liver, jaundice, enlarged liver, and dyspepsia.

Preparations and doses.—Fluid extract. Dose: Ten to 30 drops, three times a day.

The glucoside chionshine does not seem to be active.

Chinaphila Umbellata. — Pipsissewa, or winter-green, prince's pine.

Therapeutical indications.—Germicide, astringent, very useful in rheumatism and dropsy. When used for a great length of time, it excites absorption of testes and mammae.

Fluid extract. Dose: Twenty to 30 drops every three hours.

Dose: Fifteen grains, added to syrup of orange peel, every hour, or every three hours. Extremely efficacious in producing sleep in delirium tremens. Combined with bromide of potassa, it will control raving mania, puerperal convulsions.

Its persistent use creates a habit, and exhausts the ophthalmic tract; causes amaurosis.

Applied locally to the breasts, during lactation, it will arrest the secretion of milk; it is also an invaluable counter-irritant; more penetrating than cantharides.

Chloralamide.—Dose: Fifteen to 45 grains, triturated in sugar of milk, either in wafers or capsules. An efficacious hypnotic, but if administered to beer-drinkers, or tobacco-users, paralyzes the heart and vaso-motor centres.

Croton Chloral Hydrate.—Dose: Five grains in syrup, every half hour, or a 3-grain pill as frequent. Indicated as an anæsthetic for deep sleep and relief of pain. Croton chloral contains more hydrogen than chloral hydrate. It is, in fact, butyl chloral. Its practical value is the property of diminishing sensibility before producing narcosis.

Chloride of Chromium. **Dose; For external use only.** The liquid chloride of chromium is added to pulverized blood root, or any other inert powder; is made into a paste of the consistency of tar, spread on leather the size desired, and applied over the cancer, the adjacent parts being carefully protected by plaster. Spread fresh every morning, and apply until the cancer drops out, then discontinue. Indicated in all external cancers, whether they be covered with cuticle or open, ulcerating. The moment it is applied, by endosmosis, it penetrates the cancer germ, unites with it and kills it. To this germ it has a chemical affinity, as the mass of cancer germs are, when destroyed, a perfect ozonoid. The destruction of the germ is effected without pain, but the surrounding tissues are so blended in and through it that they suffer oxidization, which gives rise to some pain in the separation of the germinal mass from the healthy tissue, but much less than what is caused by any other remedy, except the ozone paste.

Chloroform.—Chiefly used as an anæsthetic by inhalation. A good formula is one part alcohol; two chloroform; three ether. Mix. It has a remarkable property when added to liniments of carrying the medicinal properties away down to deep-seated parts.

Chinoline, Salicylate, Tartrate.—Dose: Two to ten grains every three hours. Powerful antiseptic, capable of destroying the malarial germ, and the mycelia of whooping cough.

Chrysophanic Acid.—Dose, Locally; once or twice daily. Of great efficacy in psoriasis. Dissolve gutta percha in chloroform and the acid in the quantity desired, and paint over the eruption and a little beyond. The result is excellent.

Cimicifuga Rac., Fl. Ext.—Of special utility in acute rheumatism. Stimulates the nerves of nutrition, efficacious in whooping cough and all spasmodic diseases.

The bark of the cinchona tree, commonly
Cinchona. known as the Peruvian bark.

Therapeutical uses.—Tonic, vitalizer contains numerous alkaloids of immense value, and a vast numbers of preparations.

Cinchona Fl. Ext.—Dose: Ten to thirty drops added to water, every three hours. The most valuable tonic in the *Materia Medica*, protects the red corpuscles of the blood from the malarial and other germs; promotes an appetite, increases the assimilation of nutritive matter, the number of red discs in the blood; as a tannate, in the form of port wine and cinchona, with aromatic sulphuric acid, is one of the best of all tonics at the change of life.

Port wine, one quart; Peruvian bark, one ounce; pulverized cloves, cinnamon, each one ounce; one drachm of quinine and one ounce of aromatic sulphuric acid, dissolve these two together and add to the wine. Capsicum should be added. Half a teaspoonful to a teaspoonful is a dose.

Prunia, $\mathfrak{z}\text{iv}$; sulphate of quinine, $\mathfrak{z}\text{ii}$; aromatic sulphuric acid, $\mathfrak{z}\text{i}$. Mix. S. One teaspoonful, so patient takes three prior to chill.

Bisulphate quinine, 60 grs; syrup licorice, $\mathfrak{z}\text{ii}$. Mix. S. Doses sufficient.

Codeine (Phosphate).—Dose: One grain, to be increased every three hours. Destroys the fungus of diabetes.

Stone root possesses most extraordinary
Collinsonia. properties, being astringent to the entire intestinal tract. In its action it resembles stone crop, the great bowel invigorator and antiseptic, hence it is of great value in diarrhea, dysentery, gout, catarrh of the bowels, bladder, uterus. Take it all in all it is a most remarkable drug in all rectal affections.

Preparations and doses.—From 30 to 60 drops of the fluid extract every three hours. No other preparation of any value.

Colocynth.—One of the best of all remedies to evacuate the contents of the colon.

Fluid extract in doses of from 15 to 30 drops; taken alone, and can be repeated if necessary.

The leaves of the erythroxylon coca, which grows abundantly in Bolivia and Peru.

Coca. *Physiological action.*—Its administration increases the heart's action, by stimulating the ganglia of the great sympathetic; energizes the pneumogastric and vagus; equalizes the motor cells of the grey matter of the brain, arrests normal metamorphosis; appeases thirst.

Therapeutical action.—Chewing the leaves will appease hunger, thirst, fatigue. It is an excellent remedy for dipsomania, the opium, chloral, and alcoholic habit. It restrains tissue metamorphosis, diminishes the amount of urea excreted; valuable in wasting diseases and in the convalescing stages of fevers; a tonic with wide range of action.

Whenever you need the aid of a potent drug to sustain the vital power, under the condition of extraordinary fatigue and privation, prescribe coca. It promotes cohesion of nerve force; especially useful in nerve tire, worry or exhaustion.

It contains a valuable alkaloid, **Muriate of Cocaine**, an anæsthetic to the mucous surface of intensely sensitive parts, as the ear, nose, mouth, urethra, vagina, rectum.

Preparations and doses.—A bolus of the leaves is used for chewing.

A fluid extract in 30 to 60 drop doses.

Coca et celerina, same dose, great utility in neurasthenia. The wine is a tonic especially adapted to public speakers, singers, actors. It is a tensor to the vocal cords, strengthens and increases the volume of the voice.

Coca wine, dose, a tablespoonful.

Cocaine suppositories; obstetric cones; the solid extract in the spermatorrhea pill.

Cocaine.—Dose: Hypodermic use. Anæsthesia, local; for minor operations.

Cocaine.—Dose: One-tenth of a grain, solution or tablet; one added to water or on the tongue, every three hours, or more frequent. Of great efficacy in sea-sickness, as the cocaine exercises a sedative action over the semi-lunar canals.

Cocillana Bark.—Valuable in bronchial catarrh, renders cough less frequent.

Concentrated Ozone. Dose: For internal use five to ten drops; for local use rub freely over the painful part; repeat as indicated. One or two drops in a carious tooth will instantly relieve most violent toothache; rubbed over a painful nerve the pain of neuralgia ceases; two to twenty drops in sweetened water will afford most refreshing sleep; cloths saturated with it and applied (covered with oiled silk) over any portion of the body suffering from inflammation, will instantly arrest it and cause a renewal of life; to the abdomen in cholera and typhoid; to the throat in diph-

theria and scarlatina. Successfully used in parturition to alleviate its pains by rubbing it over the abdomen and lumbar plexus of nerves; if applied over the mammae when secreting the lactiferous fluid it is a more efficient arrestor of secretion than belladonna.

Conchalague (*Erythraea Chiliensis*).—Excellent, bitter tonic, like columbo. Dose of the Fl. Ext. 30 drops before meals, added to water.

Conium.—Best administered in the form of comp. conium pill; has a remarkable sterilizing action on the bacillus of cancer, syphilis, tubercle. Dose, pill every three hours.

The leaves and other parts of the lily of
Convallaria the valley.

Majalis. *Therapeutic action*.—A valuable remedy in functional and organic disease of the heart.

Its action is almost identical with digitalis in dropsy, not so definite as strophanthus, but a valuable remedy in heart mischief.

Chemistry.—Two glucosides have been isolated, also an alkaloid named *maraline*.

Preparations and doses.—An infusion of ten grains of the flowers to six ounces of water. Dose, tablespoonful at suitable intervals apart for dropsy.

A tincture and fluid extract, are best adapted for general exhibition; small doses, watching its effects.

Convallarin.—Dose: One-sixtieth to one-hundredth of a grain every four hours.

Corydalis Formosa.—The root of turkey corn is a germicide of some value, and has when administered a sterilizing action on the bacillus of tubercle and syphilis.

Preparation and dose.—The fluid extract in doses of one teaspoonful every three hours in the only preparation of real value.

The bark of the Florida dogwood is a very
Cornus mild but sometimes a valuable tonic and bacteri-
Florida cide, and has been tried and succeeded in mild cases.

Dose: The fluid extract in teaspoonful doses every three hours, is the best preparation.

Corn Silk.—Dose, from 1 to 2 drachms thrice daily, of utility in phosphatic gravel, and general diuretic.

The bark of the family lauraceæ.

Coto Bark. *Therapeutical uses*.—Of great efficacy in diarrhea, colic, toothache, gout; valuable remedy for checking the diarrhea and night sweats of phthisis.

Preparations and doses.—Tincture and fluid extract, 5 to 8 drops.

Dose: One grain for adults; half grain for children in powder or emulsion; several times a day. An alkaloid from the coto bark, of great utility in diarrhea and cholera. Cotoin is insoluble in the gastric juice of the stomach, and passes unchanged into the intestines, where it is dissolved. It is specially indicated in the diarrhea of those affected with ulcer of the bowel, in the insane, in phthisis, in the diarrhea of dentition. It is contra-indicated if there be congestion.

Cotton Root.—The inner bark of the green root is an emmenagogue, parturient and abortive; promotes uterine contractions with great efficiency.

Preparations and doses.—A fluid extract prepared from the inner bark of the green root is the most reliable, in teaspoonful doses every three hours.

Creosota.—Beech wood creasote, a bactericide of great efficacy, has a special affinity for the tubercular bacillus. The best form for administration is: Creasote, gr. xx; alcohol and syrup of each six drachms, water, three ounces. Mix. Dose, one teaspoonful thrice daily.

Creotine.—Doses, from a $\frac{1}{4}$ to a $\frac{1}{2}$ up to one grain thrice daily. A most excellent excitant of muscular action; unexcelled in heart failure.

A distillation from a potent antiseptic in medical and surgical practice. Being non-poisonous and free from irritating properties, it is rapidly supplanting carbolic acid and corrosive sublimate, especially in hospital practice. Creolin has been found valuable for vaginal irrigation in all cases of fetid discharges, as a dressing for cancerous and other foul ulcers, soothing application for scalds and burns, wash for chancre, gargle for croup and diphtheria; mouth wash in thrush; inhalation in gangrene of lungs, injection for gonorrhea, etc.

Curare.—Paralyzes the motor nerves, while the sensory, vaso-motor and inhibitory nerves are not affected, hence it is of utility in tetanus, hydrophobia, convulsions, in which affections it controls the spasm although it has no curative action on the disease. Dose: One-quarter to one grain; repeated.

Cypripedium Pubescens.—The root of the American valerian. Excellent in all nervous affections as a sedative, as epilepsy, chorea, etc. Fluid extract is the most eligible preparation.

Damiana.—The leaves and stem of the turnera microphilla, which is indigenous to Mexico.

Therapeutical uses.—An invaluable and most efficacious aphrodisiac, well worthy of use in all forms of impotency, sexual lethargy, also of utility as a tonic in nervous diseases.

Preparation and dose.—Ozonized extract from 10 to 30 drops every 3 hours.

Daturine.—Dose: One-fiftieth to one-hundredth of a grain every four hours. Valuable in neuralgia, epilepsy, nervous dysmenorrhea, puerperal mania, asthma, incontinence of urine.

Delphinium. Stavesacre, Larkspur. Grows freely in America and Great Britain. Flowers and seeds used.

Chemistry.—The alkaloid delphinia is obtained from the seeds. It is of a brownish white color, insoluble in water, but freely soluble in alcohol and ether.

Therapeutical action.—A bactericide and parasiticide; an infusion will destroy all vegetable and animal parasites on the skin, also the bacteria of wounds; the alkaloid valuable in nervous affections, and hypodermically in neuralgia.

Preparations and doses.—Three parts of the flowers to 100 of water as a wash; 10 to 20 grains delphinia to 1 ounce of alcohol. Dose, a few drops.

Diastase.—Dose: Five to twenty grains added to water at all meals. Diastase, a yellowish white powder obtained from sprouted grain, barley, oats, wheat, potato, etc. It is designed to dissolve starch in the animal economy. Trommer's malt extract is said to contain the largest amount.

Diuretin.—This salt is a double salicylate of sodium and theobromin. Endorsed as a very superior diuretic, it not only flushes the kidneys with active diuresis, but increases the blood pressure, and is a cardiac remedy of value in valvular incompetence. Dose 15 grains every 3 hours, 90 grains a day being a maximum dose.

Digitalis Purpurea. The leaves of the foxglove is a powerful arterial sedative, reduces the action of the heart, lowers temperature; exercises an unlocking influence upon the absorbent system, hence its value in cardiac disease and dropsies; small doses stimulate, medicinal doses soothe. Like other acro-narcotics, its prolonged use is disastrous to sexual vigor, destroying the reproductive or fertilizing cells in the brain and spinal centres.

Preparations and doses.—For unlocking the absorbents in dropsy, an infusion of 2 to 3 grains of the leaves to a pint of water; a wineglassful every hour. Tincture in 3 to 4 drop doses as a cardiac stimulant; in 8 to 10 drops sedative, being a permanent tonic, doses can be decreased in a few weeks.

Dioscorea Villosa.—The wild yam has a positive sedative action upon the mesenteric plexus, hence its great value in colic, cholera morbus, dysmenorrhea, other painful affections.

Preparation and doses.—Fluid ext. 30 to 60 drops added to hot water, repeat the dose until relief is obtained.

Diospyros Japanese.—Persimmon, kaki. Astringent, tonic, bactericide. An infusion drank freely in typhoid fever is of the greatest efficacy.

Dita Bark.—Dose from 15 to 30 drops of a fluid extract. In many cases an elegant substitute for cinchona.

Ditana.—Digitifolia. Very powerful galactagogue. Wineglassful of infusion, frequently.

Duboisine.—Alkaloid of Duboisia Myoporoides. Almost identical in its action with atropia; dilates the pupil more rapidly and with much less irritation; if administered internally it checks exhaustive sweating. Dose: One-hundredth of a grain every four hours.

Dulcamara.—Bitter-sweet. A germicide, a fluid extract in teaspoonful doses, of utility as an alterative.

An indigenous plant, ranks as an antiseptic, equal in potency to the wild indigo, not nearly as efficient as the siegesbeckie. Used as an infusion, tincture and fluid extract.

Has been found of some utility in diphtheria, typhoid fever, cholera infantum.

Emetine.—Dose: One-fourth of a grain, as indicated. As an emetic, expectorant, diaphoretic; lowers temperature.

Emblica, Officinalis.—The fruit of the Myrabolanus emblica; is diuretic, laxative; of great value in atonic dyspepsia and habitual constipation.

Preparation and dose.—A confection. From a half to one teaspoonful.

Ergotine.—Dose: One-fourth to one grain every four hours. By stimulating the spinal cord (lumbar portion) it causes contractions of the uterus; used in paralysis of the sphincters; enuresis; incontinence of urine; impotency; to absorb uterine fibroids; diminish enlarged prostate.

This alkaloid is one hundred times more powerful than ergotine. It possesses all the medicinal properties of ergot, intensified by producing strong, permanent contractions of the uterus the moment it is administered. It is most effectual in all hemorrhages; excites absorption of all fibroid tumors; most effectually diminishes the size of an enlarged prostate.

Mode of preparation.—The alcoholic extract of ergot is heated with dilute sulphuric acid, using ether to free sulphate from fatty matter. One pound of ergot yields three grains of ergotinine. Very valuable for hypodermic use. The strengths are: Solution, one-sixtieth of a grain to 20 minims. Hypodermic dose, 3 to 10 minims.

An annual, indigenous plant of North America. Common name, **Erigeron Canadense.** Flea-bane.

Therapeutical uses.—A tonic, diuretic astringent. A volatile oil, of the terebene species is distilled from the fresh, flowering herb, which is an active hemostatic to the uterus and bronchial mucous membrane.

Preparations and doses.—Fluid extract, 30 to 60 drops; of the oil, 5 to 8 drops on sugar, and repeat.

Yerba Santa. An evergreen shrub, growing on the mountains in southern California and Mexico. **Eriodictyon Glutinosum.**

Therapeutical uses.—Its medicinal properties are due entirely to its antiseptic properties; in this it is strong enough to sterilize the tubercular bacillus and also the amylobacta of rheumatism. Its use is of utility in all microbial states of the blood.

Preparation and dose.—From 30 to 60 drops of the fluid extract every three hours.

Ethyl Bromide.—Dose: Ten to 20 drops, added to water, every four hours. Valuable anti-spasmodic in asthma, and as an anæsthetic in short operations; the sensory nerves are blunted, while consciousness is retained.

Ethyl Iodide.—Dose: Ten to 15 drops, added to water, every four hours. Destroys the germs of tuberculæ, syphilis; exceedingly valuable alterative.

A tree which grows luxuriantly in Australia. There are two varieties,—the blue and red gum,—the eucalyptus globulus, and the eucalyptus rostratus. **Eucalyptus.**

Therapeutical uses.—In all its pharmaceutical forms it is a powerful bactericide, sterilizing and destroying disease germs. Its properties have not been so greatly valued, as a germicide, as they should be.

Administered in large doses it paralyzes the medulla; lowers heat, and slows the pulse by its microbicide properties; increases the excretion of urea. The red gum has been found valuable as an astringent, especially in throat affections.

Preparations and doses.—Eucalyptus oil, a distillate of the fresh leaves, good for inhalation, in phthisis, scarlet fever, and diphtheria; an ozonized distillation destroys the gonococcus of gonorrhea. Fluid extract, from 30 to 60 drops. Syrups, bougies, pessaries, lozenges, etc., are all prepared; the honey is also used.

A distillation from the fresh leaves, ozonized. Dose: Add one fluid ounce to four fluid-ounces of water. For external use only. In gonorrhea, used as an injection after urinating, or three times a day; for leucorrhœa, use as an injection by fountain syringe,

morning and night; for ophthalmia, keep a cloth constantly wet with it, loosely applied to the eye. An energetic agent, to destroy the germs of gonorrhea and leucorrhea. It not only destroys the germ, the factor of gonorrhea, but its use before a suspicious connection acts as a prophylactic. In the various forms of purulent or gonorrheal ophthalmia, it completely kills the bacteria or gonococcus present.

Eucalyptol.—Dose: From 10 to 15 drops, on sugar, thrice daily. Utterly insufficient to destroy the tubercular bacilli, but acts powerfully on the bacteria.

Euonymus.—The bark of the root of the American euonymus, or wahoo.

Therapeutical uses.—A powerful hepatic, but feeble, intestinal stimulant, tonic, cholagogue, cathartic.

Preparations and doses.—Fluid extract, in doses of from 30 to 60 drops, added to water.

Eupatorium Perfoliatum.—The entire herb, boneset, is used in the preparation of a fluid extract, which is the only reliable preparation made. It is tonic, emetic, diaphoretic, sedative and slightly germicide.

Dose: Thirty to 60 drops, in some warm tea; repeated as indicated.

Eupatorium Purpureum.—The root of the queen of the meadow is a valuable astringent tonic, of great utility in debility of the genito-urinary organs.

Preparations and doses.—Fluid extract 30 to 60 drops, repeated as indicated, or thrice daily.

Euphorbia Corollata.—The root of the blooming spurge is most efficacious in biliary fevers, or congestion.

Dose of the fluid extract 10 to 30 drops, repeated every 3 hours.

Euphorbia Pilulifera.—An annual Australian plant.

Therapeutic uses.—Relieves and cures the urgent, distressing symptoms of asthma. An excellent remedy in colds, bronchitis, and diseases of the respiratory tract.

Preparation and dose.—Fl. ext., from 5 to 10 drop doses repeated at proper intervals, added to hot water.

Euophen. to aristol, which is produced by the action of iodine upon thymol, and is chemically known as dithymol iodide. In euophen the iodine acts upon isobutyl-orthocresol, and contains 27.6 per cent. of iodine. It is described as an amorphous powder, yellow in color, resinous to the touch, with a peculiar aromatic odor suggestive of saffron. It is insoluble in water or glycerine, but freely soluble in alcohol, ether, etc. Its action as an antiseptic depends, as does iodoform, on the liberation of iodine in contact with pus. Its advantages over iodoform are that it has a more pleasant odor, adheres more

perfectly to the skin and mucous surfaces, is lighter and non-toxic.

Exalgine.—Resembles antipyrin, acts energetically upon the spinal cord; small repeated doses cause the capacity for pain to be suppressed by blunting the sensory nerves, lowers pulse, heat, respirations, by inducing muscle failure of the heart.

Exrine.—An alkaloid from the calabar bean; of great utility in asthma; angina. It has the direct opposite action of atropia or belladonna. It increases the secretion of milk and contracts the pupil. Its action upon the spinal cord renders it of great value in cholera, dysentery. Dose: From one-twelfth to one-thirtieth of a grain every four hours.

Fel Bovis.—Ox gall. Tonic and germicide. Used with success in dyspepsia and deficiency of bile.

Fennel Seed, Fl. Ext.—Of utility in colic, relaxant, diaphoretic; has a special contracting power on the broad ligaments of the uterus, hence its value in prolapsus uteri. Dose: One teaspoonful in warm water, as indicated.

Frasera Carolinensis.—The root of the American columbo is tonic stimulant, and slightly astringent; a good drug in indigestion, debility.

Preparations and doses.—Fluid extract. Dose: 30 to 60 drops before meals, added to water.

Fluoric Acid.—The fumes of this acid are the only known remedy that will cause a dissolution of cataract. Dose: Local; twice weekly.

Fluoric Hydro-Acid.—Indicated in goitre. Minute doses every four hours.

Fluorides of Ammonia, Iron, Quinine.—Excellent in hypertrophy of the spleen, the result of chronic malarial fever. Dose: One-fourth to one grain thrice daily.

The plant, *Tradescantia erecta*, indigenous to Mexico.

Fowlwort.

Therapeutical uses.—A powerful styptic, even more astringent than the perchloride of iron. Crushed and steeped in either water or alcohol, and applied to a bleeding surface. Vessels cut 6th or 7th order, remedy applied, instant arrest of hemorrhage.

Frankenia Grandiflora. *Verba rheuma*, indigenous to California.

Physiological action.—A microbicide infusion, excellent as a douche in catarrh, ozæna, gonorrhœa, leucorrhœa; in an ointment, useful in tinea, lichen, eczema; and internally it sterilizes the microbes of diarrhœa and dysentery.

Preparations and doses.—A fluid extract is the most available.

Francisca. Manaca, or the plant, *Francisca uniflora*, native of Brazil.

Therapeutical action.—A powerful, energetic bactericide, completely annihilates the bacillus amylobacta of rheumatism and of syphilis; does good work in lepra and psoriasis.

Preparations and doses.—Ozonized fluid extract, in doses of from 10 to 20 drops. Great care is requisite to so manipulate it as to obtain splendid results.

Frostwort. Fl. Ext.—Dose: One teaspoonful every three hours. Alterative.

Sea-wrack, or sea-weed, algæ.

Fucus Vesiculosus. *Therapeutical uses.*—Contains a large percentage of iodine combined with the salts of potassa and soda, its chemical constituents being chiefly iodine and ozone from nature's laboratory—the one from the sea, the other from the atmosphere. The vitalizing properties of each render it a remedy of inestimable value as an alterative.

If the fluid extract is prepared from good, fresh sea-weed, dried under cover, it is one of the best alteratives, and has a remarkable affinity to strip off fatty tissue, and cause a reduction of the weight of the body.

Dose: Ozonized fluid extract, 1 to 2 drachms.

Galazenia.—A pleasant and nutritious beverage, containing one per cent. alcohol, and heavily charged with carbonic acid gas. It is prepared by adding four grains of grain yeast to a little water, sweetened, which is added to one half-pint bottle of milk, shaking the mixture, allowing the fermentation to take place. Dose: Wineglassful thrice daily.

Galium Aparine. The annual plant *Galium Aparine* grows freely in England.

Therapeutical Properties.—Germicide, destroys the microbe on ulcers, wounds, and in skin diseases. The succus or the expressed juice of the fresh plant will destroy a cancerous tumor.

Preparations and doses.—Dose of the fluid extract, 5 to 20 drops three times a day.

The succus added to petroleum ointment makes a splendid ointment to hasten the healing of old ulcers.

Garcinia.—The fleshy fruit of the *Garcinia Indica*, from which is expressed a white, oily substance called *kokum butter*, which is a good base for some ointments.

Gaultheria.—Oil of wintergreen. Preparations.

Glycerite of Wintergreen, (*Ozonized.*)

Indicated in all cases of acute or chronic rheumatism. When administered it unites with the lactic and

butyric acids, and renders them inert, at the same time its tonic and antiseptic action upon the organs of digestion and assimilation prevents the formation of those acids, hence its use stamps and starves out the disease. Dose: From one half to one teaspoonful every two hours.

A perfect substitute for salicylic acid and soda. The superiority of this preparation is seen in the rapid cure of both acute and chronic cases, the infrequency of relapses, and the prevention of cardiac complications.

All physicians who use this prefer it to the various compounds produced by artificial means.

Gelsemin. The bark of the root of the yellow jasmine, which grows freely in our Southern States.

Physiological action.—A cerebral sedative in small doses; administered in large doses, it causes vertigo, double vision, paralysis of the sensory columns of the cord, heart's action slowed, temperature lowered.

Chemistry.—It contains a glucoside, which is soluble in alcohol or ether, but sparingly soluble in water; and an acid "gelsemic acid."

Therapeutical uses.—An excellent remedy in all forms of malarial fever, in neuralgia, and nervous affections generally. It has a most decided action upon the sexual appetite, and is a remarkable sexual sedative, cutting off erections as well as desire.

Preparations and doses.—A tincture prepared from the bark of the root, freshly dug out of the ground. When in full bloom is the best for general use, being in dose from 5 drops up. The powdered ext. or abstracta, good. All other preparations are most unreliable, even the hydrochlorate of the gelsemin is not a safe drug.

In malarial fever it is administered as follows: Sulphate quinine; prussiate iron, ãã gr. xxx; abstracta gelsemin, gr. iii; abstracta mandrake, gr. iii; oil black pepper, grs. q. s. To make 30 pills.

Give one or two every hour, so that three doses are taken before the chill, or make into powders by adding capsicum instead.

Another is green root tincture gelsemin, one ounce; sulphate of quinine, two drachms; aromatic sulphuric acid, half a drachm. Dissolve the quinine with the aromatic sulphuric acid, then add the gelsemin. Dose: Half a teaspoonful added to water, so that three doses be taken before the chill. It never should be administered in infantile diseases.

Gentiana.—Gentian. A valuable bitter tonic and germicide, extremely useful in dyspepsia, jaundice and gangrenous sores.

Geoffroya.—The bark of *Geoffroya thermis*, growing in the West Indies. Known as bastard cabbage.

Therapeutical uses.—Parasiticide, inimical to the tape worm. Large doses produce nausea, vomiting, purging.

Preparations and uses.—A fl. ext. in doses of 30 drops thrice daily.

Geranium Maculatum.—Crows foot, is generally used where an astringent is indicated for the mucous membrane of the stomach and bowels.

Best preparation is a fluid extract in doses of 30 to 60 drops.

Glonoine. Nitro-glycerine, is prepared by dissolving glycerine in nitric and sulphuric acids. For medicinal purposes it is dissolved and diluted in alcohol.

Physiological action.—It is a prompt powerful excitor of vasomotor action; accelerates the action of the heart, relaxes arteries, causes a general sense of fullness, and is a direct sedative to the medulla oblongata.

Therapeutic uses.—Of great utility in vertigo, headache, asthma, angina pectoris, neuralgia, chronic interstitial nephritis, sea-sickness, all disturbances of the inter-cranial circulation, asphyxia.

Preparations and doses.—A one per cent solution in one, two or more drop doses; or a one per cent. solution in pill form, as indicated.

Glycerine. The sweet principle of oils and fatty bodies; soluble in water and alcohol; insoluble in ether, chloroform and fixed oils.

A germicide and valuable menstruum. Its dehydrating property causes it to be a laxative when administered internally; this same property renders it of intrinsic value in many skin affections, as by drawing of the serum, inflammatory action is relieved, cicatrization promoted. Its general use must ever be most emphatically condemned, in the form of a suppository for habitual constipation. Such suppositories drain off the serum, exhaust the mucous and serous coat, render the bowel weak, liable to disease, especially carcinoma.

Glycerite of Kephaline. *(Ozonized.)* Indications. As this is a true brain essence, it is of the greatest efficiency in all nervous diseases, as mental and

physical exhaustion, wasting diseases, loss of memory, vertigo, worry, struggle, nervous debility, decay of brain power, premature and otherwise, nervous prostration, neuralgia, loss of vital

power, general vital deterioration, sleeplessness, paralysis, white softening, typhoid; effectual and permanent cure in all cases of nerve debility; builds up the brain, restores lost energy, refreshes the nerves, stimulates the sexual appetite and supplies it with nervo-vital fluid. It thus is a positive cure for seminal weakness, impotency or loss of power in the generative organs. It is also of great efficacy in leucorrhea, female weakness and change of life. Gives intellectual vigor and vivacity. Dose: From 10 to 30 drops every three hours.

X **Glycerite
of
Ozone.**

Dose: Fifteen to thirty drops for the first fourteen days, then increase it slowly to sixty drops every three hours. Whenever the tubercular bacilli appear in the blood or any weakened part, it annihilates the microbe in all the fluids and solids of the body; the factor of pulmonary consumption being destroyed—wasting; debility; cough; loss of voice; expectoration; nightsweats; hæmoptysis, and difficult breathing *cease*; under its use the pulse slows, heat, respirations *diminish*; phosphates and chlorides in urine become *normal*. The remedy either in stomach or rectum liberates its ozone which enters the blood, acts as a scavenger and vitalizer to germ-laden blood, cleansing it. It is very efficacious in tubercular meningitis, tabes mesenterica, diabetes, pink marrow engorgement, typhoid fever, Bright's disease, and in all diseases due to the presence of micrococci in the blood.

**Glycerite
of Sulphur.
(Ozonized.)**

Equal if not superior to glucozone; a bactericide of immense value and power which has a special affinity for the microbe of diphtheria and scarlatina. Its exhibitions should be commenced in small doses, perseveringly held on to, and the dose slightly increased, even though temperature lowers, until the microbes are all killed, which is known by the remedy acting on the bowels, it then should be gradually decreased and at longer intervals till convalescence is established. It has always been found of intrinsic value in all cancerous affections, alternated with the Chian turpentine mistura.

This is a combination of dioxide of hydrogen and C. P. glycerine, in variable proportions, some use is as weak as two ounces of the peroxide to 14 ounces of glycerine; others 4 ounces to 12 according to the therapeutic effect desired.

In any or all of its different strengths it is a powerful bactericide, destroys all disease germs. It is well adapted in this form for oral administration, good in dyspepsia, catarrh, ulcer, or induration of the stomach.

Well adapted for spray in aphthæ, enlarged tonsillitis, diphtheria, scarlet fever; also of great efficacy in ulcers; in this

form it is of the greatest possible utility, for when it comes in contact with the tissues it liberates its ozone, vitalizes, purifies.

A West India climbing shrub.

Goania. *Therapeutical uses.*—Has a strong germicide action, chiefly used in gonorrhea, mouth lotion; very serviceable in general debility and dropsy.

Generally used in the form of a fluid extract in doses of from 10 to 20 drops.

The entire herb *grindelia robusta*, which
Grindelia. grows in California, is used.

Therapeutical uses.—Possesses strong bactericide properties, which render it of great value in all microbial affections of mucous membranes, as whooping-cough, asthma, bronchitis, ophthalmia, leucorrhœa, uterine catarrh.

Preparations and doses.—Fl. extract is the best form for general use. Doses, variable from 10 to 30 drops and upwards.

Guaco.—Bactericide. A decoction is of great utility in snake bite.

Guaiacum.—Fl. extract prepared from the resin, is of great efficacy in the destruction of the amylobacta of rheumatism. A decoction of the wood administered freely is also a germicide and diaphoretic, valuable in rheumatism.

A bactericide isolated from creosote, a
Guaiacol. strongly refractive, oily, colorless, limpid liquid, of an aromatic odor, soluble in 200 parts of water, especially destructive to the tubercular bacilli, and has the remarkable property while being taken of augmenting vital force,

A most eligible method of administration is as follows: Guaiacol, 15 grains; alcohol, 8 ounces; fluid extract American columbo, 1 ounce. Mix. Dose, from 5 to 15 drops added to water after meals, which can be gradually increased; it kills the bacilli as an inevitable result, a disappearance of cough, hectic, sweats, emaciation with a remarkable increase of appetite. A splendid remedy with which to alternate the glycerite of ozone.

The guaiacol mistura ozonized, is the best form in which to administer it; this is composed of guaiacol, glycerine, American columbo, and dioxide of hydrogen.

The seeds of *paullinia sorbilis*, growing in
Guarana. Brazil.

Chemistry.—It contains an active principle called guaranine, which is identical with caffeine, tannin, gum, extractive matter.

Therapeutical uses.—Being a powerful nerve stimulant it is valuable in nervous or anæmic headaches; its astringent properties render it of efficacy in diarrhea and dysentery.

The best preparation is a well prepared fluid extract in doses of from 10 to 30 drops as indicated.

The elixirs have little medicinal property, but contain chiefly bad whiskey.

Gurjum Balsam.—Possesses identical properties as balsam copaiba. Best administered in the form of an emulsion.

Hamamelis. The bark and leaves of the Hamamelis Virginica, which grows in Canada and the United States.

Therapeutical uses.—Possesses invaluable astringent, styptic properties, and is useful in hæmorrhages from mucous membranes, as in epistaxis, hæmoptysis, hæmatemesis, menorrhagia, hemorrhoids, hematine bruises, wounds.

Preparations and doses.—Fluid extract in doses of one or two drachms.

The ozonized distillation of the green leaves contains all the "hazeline" of the witch hazel, the volatile principle, a clear, elegant and efficacious product, is unequalled for contusions, sprains, swellings; its properties are highly germicidal, anodyne, sedative, styptic, tonic, astringent—also used internally.

The ozonized distillation excels all other preparations.

Hair Cap Moss.—Strong infusion; drink freely every four hours. Dropsy.

Hederine.—The ivy gum or the hederæ helix yields an invaluable alkaloid, hederine, which resembles quinine in its action.

Dose.—One-quarter to two grains.

Helleborein. (Black Hellebore) Resembles digitalis in its action. Dose: one-fifteenth of a grain as indicated.

Helonias Dioica. A powerful stimulating tonic to the genito-urinary organs.

The fluid extract in 30 to 60 drop doses every three hours.

Henna.—The dried leaves of the Lawsonia inermis. Valued by the natives of Arabia as a liver stimulant, acts like the chionanthus virg. in jaundice.

Preparations and doses. Fluid extract in from five to ten drops added to water every three hours.

Hepatica. Liverwort, a cryptogamic plant.

Of utility in hepatic affections, also in chronic coughs and hæmoptysis.

Fluid extract. Doses, 15 to 30 drops and upwards.

Hoang-Nang.—The bark of a creeper growing in China and Hindoostan.

Therapeutical uses. A powerful and peculiar bactericide, its use neutralizes snake bites and the inoculations of rabies. Kills the bacillus of leprosy and hydrophobia.

An alkaloid obtained by the action of
Homatropine. hydrochlorates on benzo-glycolic acid.

Therapeutical uses. Used very extensively by oculists. Its action paralyzes the ciliary muscles and dilates the pupil. Its action disappears in a few hours.

Preparation and dose.—One-hundredth to one-hundred-and-twentieth of a grain.

Humulus Lupulus.—Hops are nerve tonic and sedative, and are useful.

A fluid extract is most eligible for general use in doses of from a half to one teaspoonful every four hours.

Hydrangea Fluid Extract.—Diuretic, solvent to urinary calculi. Dose: Twenty to thirty drops every three hours.

Hydrastis Canadensis, commonly known as

Hydrastis. golden seal.

Physiological action.—All preparations of the hydrastis act as a vaso-motor constrictor—average doses of it paralyze the vaso-motor centres and diminishes blood pressure.

It determines contraction of the uterine blood vessels, so that considerable benefit accrues from its use in pelvic congestion, labor, hæmorrhage.

Therapeutic uses. Excellent in atonic dyspepsia and sluggish liver; a tonic and cholagogue; a good remedy to chronic ulcers both internally and locally. It yields some energetic alkaloids, as hydrastia, zanthopnoëia, hydrastinine.

Preparations and doses. Fluid extract. Alcoholic and non-alcoholic, 30 to 60 drops thrice daily; hydrastine 2 to 6 grains; hydrastinine, dose, 1 grain as a substitute for ergot.

A pure, colorless liquid, without

Hydrobromic Acid, odor, with a strong, acid taste, prepared from either bromide of potassa or barium with sulphuric acid.

Therapeutic uses.—A heart sedative, lessens nervous excitability; checks the nerve storm of epilepsy; relieves insomnia and is an anodyne to the stomach.

Preparations and doses.—A 10 per cent. solution, in doses of from 30 to 60 drops, thrice daily, added to water.

The hydro-bromate of quinine. Dose: One to 5 grains.

Hydrochinon.—Dose: Local application. Destroys bacteria on all breaches of continuity; excellent for saturating bandages for surgical dressing.

Hydrate of Terpin.—Dose: A few grains. An alkaloid from turpentine.

This belongs to the aniline class of coal tar
Hydracetin. derivations. It is in the form of a white powder, odorless and almost tasteless; soluble in water of one in 50. Soluble in alcohol.

It is a powerful, highly poisonous cardiac depressant, lowers heat, pulse, and respirations.

Invariably causes heart-failure.

Dose : One to 2 grains a day.

The plant, *Hydrocotyle Asiatica*, grows in Asia and Australia.

Hydrocotyle.

Therapeutical uses.—Alterative, tonic, and germicide; of great utility in syphilis, skin diseases, leprosy.

It improves digestion and assimilation.

Dose : Fluid extract or tincture, 10 drops, every three hours, added to water.

Hyoscyamine.—*Dose* : One-fortieth to one-hundredth part of a grain, in pill or solution, every two hours or more frequent. Of utility in inflammation of the brain, in mania, in hernia, in all affections of the hollow organs of the body.

Hyoscine Hydrochlorate.—*Dose* : One-fiftieth to one hundredth part of a grain, in pill or solution, once and repeat. Beneficial as a sedative in mental diseases.

Hypnone.—*Dose* : From one-half to one and a half grains, mixed with glycerine and added to capsules; repeated according to indications. A superior hypnotic, reduces the functional activity of the brain, lessens the excitability of the vagus, reduces the blood pressure and is superior to chloral and bromides for inebriates.

Hypericum. *Hypericum perforatum*, or St. John's wort.

Therapeutical uses.—It is an astringent, and antiseptic; good for gravel, diarrhea, hemorrhage, worms, jaundice, wounds, bruises; contains a volatile oil and resin.

Preparations and doses.—The fresh leaves bruised and applied to ulcers, or the flowers macerated in olive oil in the proportion of four ounces to the pint, or submitted, like the mullein oil, to polarized light.

The fluid extract is most available for external use. *Dose* : Thirty to 60 drops, every three hours, in dysentery.

This form of medication has been found of great efficacy in a large class of cases.

Hypodermic Medication. The patient should be an adult, the skin should be raised by grasping it with the index-finger of the left hand, and the nozzle of the syringe inserted by a rotatory and piercing movement into the cellular tissue for at least one-half or three-quarters of an inch; into this the remedy is deposited, and the syringe withdrawn in the same manner as inserted, and, as it is withdrawn, the index-finger pressed firmly for a few minutes on the aperture. The best locations for use are those in which there are few veins, such as,

over the deltoid, and nape of neck. The remedy used, if possible, should be an alkaloid, the dose put up in the form of a compressed tablet, which dissolves readily in a few drops of water. The advantage of this form of medication is the greatest positive accuracy, compactness, and permanency.

The following maladies have been successfully treated by this method :—

Abscesses, injected with C. P. dioxide of hydrogen, are perfectly obliterated.

Apoplexy. After free cupping to nape of neck and shoulders, active purgation, mustard, with heat, to lower extremities, is most successfully treated by subcutaneous injections of ergotine.

Boils. At any stage, aborted by injections of C. P. peroxide of hydrogen.

Bubo. Aborted by the same procedure and remedy.

+ *Chloroform-Poisoning*. One drop of a 1 per cent. solution of nitro-glycerine in 15 minims of distilled water, which can be repeated in a half or one hour.

Chorea. The glucoside scutellarine, 2 grains in a solution, or from one-twentieth to one-fortieth of curare, has been successful hypodermically.

Convulsions. Hypodermically, one-eighth or one-fourth of a grain of solution of sulphate of morphia immediately breaks the attack.

Convulsions, Puerperal. Chloral subcutaneously is better than orally.

Congestive Chills. Injections of atropia, alternated with bisulphate or bromate of quinine.

Croup, membranous. Dioxide of hydrogen, 3 to 6 drops, respectively of glycerine and water, injected into the cellular tissue over the thyroid gland, dissolves the membrane, enables its expectoration, and substitutes tracheotomy.

Dysentery. Morphia, hypodermically, in one-third-grain doses, has been found more rapid in relieving tenesmus than any other opiate.

Eclampsia, Puerperal. Veratrum viride, 2 to 4 drops of the tincture, subcutaneously, as required to keep the pulse down to about 60. Pilocarpin, 2-per-cent. solution, is also recommended.

Eczema. Arseniate of soda, hypodermically, in solution of one-fifth, one-half, and 1 per cent., commencing with 10 minims of the weaker, and gradually increasing, is recommended.

Enuresis, Nocturnal. Two very small doses of the nitrate of strychnia, injected in the vicinity of the rectum at suitable intervals, have proved successful.

Epilepsy. Curare in solution, 2 grains in 25 minims of water, with 2 drops of hydrochloric acid. About once a week inject about 4 drops beneath the skin. It has cured cases of several years' standing within two months.

Erectile tumors have been successfully treated by injections of perchloride of iron and chloride of sodium in solution, the tumor to be surrounded by a ring.

Erysipelas. Carbolic acid, 3-per-cent. solution, eight or ten injections at the same time, so as to surround and cover the inflamed regions; also salicylic acid in the same manner.

Foreign Body in (Esophagus. Threatened strangulation from impaction of gullet has been promptly relieved by inducing vomiting. Apomorphia, one-tenth grain, hypodermically. Emetina is also suggested in the same way.

+ *Fractures, Ununited.* Glacial acetic acid, 5 to 10 minims, between ends of the bones with hypodermic syringe. Iodine has also succeeded, used in the same way.

+ *Goitre* has been successfully treated by subcutaneous injections of ergotine, one-third, gradually increased to 1 grain.

Hemoptysis. Scleretonin acid (substitute for ergotine), 5-per-cent. solution injected in the neck or arm.

Hemorrhages. Hemorrhages, hematemesis, and uterine hemorrhages have all been arrested by hypodermics of ergotine, and ergotinine. If pain, add morphia.

Hernia is more easily reduced by giving a hypodermic of morphia, with or without atropia.

Hiccough. In an obstinate case, resisting all other means, three-eighths of a grain of chlorohydrate of pilocarpin, hypodermically, quickly proved successful.

Hydrophobia. Much amelioration of the symptoms has followed hypodermics of curare.

Obstruction of the Bowels. Aloin has been used with success, subcutaneously, to move the bowels.

Opium-poisoning. Quite rapid recovery is reported to have followed warm hypodermics of fluid extract coffee, in 30-minim doses. Caffein citrate and sulphate atropiæ are also considered antidotes to opium.

+ *Perspiration, Arrest of.* Pilocarpin, the alkaloid of jaborandi, will cause more or less profuse sweating, according to amount injected beneath the skin.

+ *Polypus, Nasal.* Carbolic acid, 1 part; glycerine, 4 parts; 20 drops sunk into tumor by means of hypodermic syringe effectually dissipated polypus in some cases reported.

Retention of Urine from paralysis of the bladder, accompanying typhus, variola, and hydrocephalus, has been promptly overcome by hypodermics of ergot in the fossa behind the great trochanter.

Skin-diseases caused by animalculæ. Sulphuric, carbolic, salicylic, or sclerotinic acids, hypodermically, as in erysipelas.

Snake-bites. Ammonia, brandy, carbolic, or salicylic acids are all recommended, hypodermically, in case of snake poison, and have been injected with benefit directly into a vein.

Strychnia-poisoning. Caffein, 1 grain, hypodermically; alcohol in same way is also suggested; chloral injections are also mentioned.

Surgical Shock. Quinine, 6 grains, hypodermically, with one-third grain of morphia.

Suspension of Salivary Secretion. Pilocarpin excites salivation.

Sweats, Night. Atropine has given good results.

Syphilis Bacillus completely annihilated by injections of albumenic solutions of the proto-iodide of mercury.

Tetanus. Nicotine, one-three-hundredth of a grain, alternated with chloral hydrate; accompanied internally with powerful antispasmodics.

Trichinosis. Ergot, dioxide of hydrogen, hypodermically, have effected cures.

Tumors. Hypodermically, dioxide of hydrogen, followed by faradization, sponged, moistened with the same remedy.

Urticaria. Saturated solution of bisulphate of soda, peroxide of hydrogen, and other bactericides.

Hysterionica Baylahuen.—A plant, a native of Chili; has germicidal properties; kills the sarcinæ of stomach and bowels, also the micrococcus of diarrhea and dysentery.

A fluid extract is the most eligible method of administration.

A distillate of bituminous substances. In appearance it resembles coal tar; it unites freely with petroleum ointment or oil, and is partly soluble in alcohol or ether.

Therapeutical uses.—A cutaneous bactericide. Its value consists in its high percentage of sulphur, its solubility in water, and its freedom from toxic properties. It is used both internally and externally in various forms of rheumatism, gout, etc., also in parasitic skin diseases, eczema, etc., variously diluted with water, or in the form of an ointment.

The oils of the Standard Gas Co., Ohio, yield a substance chemically identical, which is termed "Tumenol," which is of utility in all skin affections, burns, and rapidly heals ulcers.

Ignatia.—A cerebro-spinal stimulant, resembles nux-vomica in its action. The dose is the same as nux.

Inulin Helenium.—Elecampane was known to the ancients as an aromatic stimulant, tonic, and bactericide. Has a wide range of action from rabies to simple nervous affections.

Preparation and dose.—Fluid extract in from 30 to 60 drop doses every three hours; Helenin, about 2 grains, as often.

Ingluvin.—The gizzard of the common hen.

Therapeutical uses.—Used as a substitute for pepsin and papoid in dyspepsia, in the sickness of pregnancy, in diarrhea; cholera infantum, and marasmus; in chronic gastric irritation and all forms of faulty digestion.

Dose: 5 to 10 grains after meals

Iodine.—A bactericide with a special stimulating action on the glands of the body. It is never administered in its pure state, unless it be in starch, or tincture in sweet milk. Its various compounds are of priceless value in the management of microbial affections, as syphilis, etc.

Iodized Hydrogen Water.—Uric acid accumulations. Dose: One ounce thrice daily.

Iodized Iodine.—Dose: From 5 to 15 drops added to water, of great efficacy in causing the complete annihilation of the bacilli of tubercle and syphilis.

Iodoform.—The addition of four drops of oil of sassafras to the ounce entirely covers its odor. Dose: Sprinkling on by powder or solution.

As this salt contains ninety per cent. of C. P. **Iodol.** iodine it is an active germicide. Sprinkled on a chancre it at once changes it to a simple ulcer—great utility in uterine and rectal ulcer, one application being often sufficient to effect a cure; a solution in alcohol and glycerine makes an invaluable lotion in phagedenic sores, carcinomatous ulcers, bed sores, etc., destroys the germs; first application with that the offensive odors disappear. Dose: A powder resembling iodoform, free from its disagreeable odor and toxic property; sprinkle on by powder or solution.

A mixture of iodol and thymol gives us what is termed **aristol**—iodide of thymol.

Ipecacuanha.—**Ipecac.**

In large doses emetic; small doses have a remarkable sedative action on the stomach. Tincture, syrup or wine, all elegant forms.

Iris Versicolor.—Blue flag, a powerful hepatic stimulant. Also increases the peristaltic wave.

Preparation and dose. 10 to 20 drops added to water repeated three or four times daily.

Iron.—Various preparations of this metal are administered to increase the coloring matter of the red blood corpuscles.

The tincture of the chloride in 15 drop doses added to water; the acetic tincture in 30 drop doses; iron by hydrogen in 5 grain doses.

Iron-Alum. Indicated in all cases of uterine hemorrhage; it rarely fails even in the most violent flooding. It is a styptic of the first order and a valuable antiseptic. Dose: locally.

Iron Oxide Saccharated.—Increases the hematine of the blood. Dose: a few grains every four hours.

Isphaghula (Plantain). Indicated in catarrh of the colon and rectum. They absorb the catarrhal secretion, with which they swell up, and pass from the bowels; excellent in chronic diarrhea and ulceration of the bowels. One part of the seeds mixed

in twenty of water makes a thick, tasteless jelly, and is to be preferred to quince seeds. Dose: One teaspoonful of the seeds mixed with sugar in an uncomminted form; one or more frequent, as indicated.

The dried leaves of the pilocarpus pennatifolius yield an alkaloid, pilocarpine, which when administered produces copious perspiration, a slowing of the heart, a lowering of temperature following its use. It is an antagonist to atropine supposed to be capable of re-establishing the secretion of milk.

Preparations and doses.—The fluid extract in 10 to 60 drops added to water, and repeated as indicated, is of value in asthma, diabetes, eye affections, or eruptive fevers; whereas pilocarpine operates best in albuminuria, dropsy. One-tenth of a grain to the dose triturated in sugar of milk.

Hot drinks to be avoided; patient must not swallow saliva.

Jamaica Dogwood.—Fluid extract in doses of from 30 to 60 drops every three hours. Of great efficacy in neuralgia.

Jequirity Bean (Pulverized). Indicated in all forms of opacity of the cornea or lens, also in granular lips. Dose: Local use in ocular affections, an infusion of eight beans pulverized to six ounces of water; applied once or more frequently until exfoliation of the mucous membrane of the eye takes place.

Jequirity Ozonized Distillation. Indicated whenever the *oidium albicans* or its mycelia or micrococci are present, as in diphtheria, ozæna, tubercular, syphilitic, gangrenous, ulcerated sore throat, putrid sore throat, fetid breath, gangrenous ulcers, sloughing bed-sores, gangrene. The moment it touches the part it instantaneously destroys the disease germ, and thus arrests morbid action. Paint the diphtheric patch or colony every three hours with it, in full strength. Afterwards add one teaspoonful to half a tumbler of tepid water, and use as a gargle *ad libitum*. It immediately destroys the germs, the factors of disease, which are expectorated. Pursue same method in tubercular, syphilitic and sloughing sore throat. In urgent cases of diphtheria, use in an atomizer, full strength. Use in ozæna by a douche diluted two-thirds or one half. To foul gangrenous ulcers, full strength, for an hour, then dilute one-half, in which form it is of utility in parasite and cryptogamic skin affections. Dose: Local use, gargle or spray every three hours or more frequent at the discretion of the physician.

Jequirity Wafers (Ozonized).—Produces most marvellous results; causes a perfect exfoliation from the neck of uterus and vaginal walls; by inhibitory action the remedy enters the uterus and causes a perfect desquamation of its internal lining membrane, hence they are of great utility in leucorrhœa, catarrh, ulcers, thickening, and all uterine affections; they cause a perfect revolution in the tissue. Dose; One or two wafers; dip in

water. Inserted well up the vagina on retiring to bed, and allow it to remain over night.

Judas Tree.—Dose of the fluid extract from 30 to 60 drops, repeated every three hours. Valuable in chronic diarrhea and relaxed conditions of the mucous membrane of the alimentary canal.

Jurubeba. Very serviceable drug in states in which the liver is sluggish. Its administration causes a free flow of bile, excites a hydragogue action, besides it acts upon the genito-urinary organs as a stimulant. Dose of the fluid extract from 10 to 30 drops, repeated every three hours.

The inner bark of the *Juglans civeria*, known as

Juglans. the butternut, or white walnut.

Therapeutical uses.—A mild cathartic operating without pain or irritation. An excellent remedy in habitual constipation.

The best preparation is a fluid extract in doses of from 30 to 60 drops.

(Pulverized root of Japanese persimmon).—Dose :

Kaki. One to two tablespoonfuls to a half pint of boiling water; when cool, permit patient to drink freely. It is indicated in gastric catarrh, chronic diarrhea, typhoid fever, dysentery, ulceration of the bowels, catarrh of the colon and rectum. Decidedly one of the best remedies ever introduced, as it excites a renewal of life in the various coats of the entire intestinal tract; a sovereign remedy in the diseases enumerated.

Kalmia Latifolia —The Mountain Laurel.

Therapeutical uses —A bactericide, with narcotic action, being valuable as a cardiac sedative, and of utility in destroying the syphilitic microbe.

Preparations and doses.—Fl. ext. in from 2 to 5 drop doses.

A plant which grows in Tahiti. The root contains a crystalline principle "kavalin," an essential

Kava. oil, with resin and starch.

Therapeutical uses.—It exercises a stimulant and tonic action, like cubebs. It is employed to sterilize the gonococcus and other germs on the mucous membranes. It is also of utility in all catarrhal states of the bladder.

Preparations and doses.—Fl. ext. Dose, 30 to 60 drops; and a solid ozonized paste. Indicated as a remedy to destroy the gonococcus of gonorrhea, which it does most effectually and promptly.

Kefir.—Dose: A glass every three hours. A species of fungus, containing yeast cells, which, when added to milk, rapidly changes it into alcohol, lactic and carbonic acid. It makes a superior form of koumiss, which is indicated in defective nutrition or where nutrition is below the physiological limit.

The seeds or nuts of *sterculia acuminata*, growing
Kola. in West Africa.

The physiological and therapeutic action are almost identical with the coca leaves. They are said to appease the appetite or craving for drink, for food, give great endurance, and are a tonic to the digestive tract, and increase the activity of the peristaltic crave, hence of great utility in habitual constipation and heart failure.

Chemistry.—They contain caffeine, theobromine, starch, glucose, and a volatile oil.

Preparations and doses.—The nuts are digested in glycerine, with tamarinds made into a paste, then made into lozenges; of great utility in constipation. Fl ext. and other preparations identical with coca.

Dose: As a vital constructor to shattered nerve force, take a piece the size of an ordinary pea thrice daily; as a laxative, a half a teaspoonful on retiring to bed. This great vital constructor is of special utility in neurasthenia or poverty of nerve force, nerve tire, worry, headache, depression, nausea, loss of appetite, liver torpor, piles, great despondency, insomnia, palpitation of heart, intercostal neuralgia, depraved secretions.

Tired business men, strained, overworked, exhausted clergymen, weak, nervous, debilitated ladies, puny, ill-grown or tissue-starved children, should use this paste. Its daily use cheats the grave of its premature victim.

It has a specific effect in depriving the victim of the alcohol, morphia or chloral habits of the appetite for those stimulants.

Kola Nut (in lozenge form).—*Dose:* A half of one every evening. This remedy forms a palatable and efficient method of administering the drug for constipation; an invaluable remedy in syphilis.

Koroniko.—The plant *veronica salicifolia* and *veronica parviflora* possesses strong microbicide properties and when administered in diarrhea and dysentery, kills those germs and affords instantaneous relief.

Preparations and doses.—The fluid extract in doses of from 10 to 20 drops as indicated, is most efficient.

Indicated whenever carbonic acid is wanted
Koumiss. to soothe the base of the brain. Koumiss in Russia is prepared from mare's milk, sugar and yeast; in Switzerland from goat's milk; in this country from cow's. It is highly effervescent and the caseine of the milk is by fermentation divided into microscopical particles, which are supposed to be easily assimilated by a weak stomach. The milk of the cow does not make good koumiss. *Dose:* A wine-glassful every three hours.

Koussin.—The active principle of the female flowers of *Brayera Anthelmintica* has been quite extensively tested as a remedy for tape worm.

Preparations.—Koussin 10 to 20 grains for adults; 2 to 5 grains for children.

Kurchicine, Concentrated Tincture.

(*Highly Ozonized.*)

Of immense utility in the quotidian, tertian and quartan types of malarial fever, as it destroys the micro-organisms which give rise to

that class of pernicious fevers. So definite and potent is its action that after the first dose the odoriferous character of the dead germs can be detected in the sweat, saliva, urine. The bowels must be opened; all fluids strictly forbidden either with the remedy or for several hours subsequently, or between doses, as watery fluids supply a pabulum to germ evolution in the blood. The remedy causes the malarial germ to disappear from the blood and tissues. It is valuable in small doses in all fevers or states of debility. It changes the electrical forces of the body from a negative to a positive state. Dose: One or two table-spoonfuls three hours before the chill; the same ten minutes before the cold stage.

Lactopeptine.

The extended use and adoption of lactopeptine by the medical profession affords indisputable evidence that its therapeutic value has been thoroughly established in cases of indigestion, dyspepsia, loss of appetite, impoverished blood, general debility, intestinal and wasting diseases of children, chronic diarrhea, constipation, vomiting in pregnancy headache, nausea and all diseases arising from imperfect nutrition. Dose: Five to ten grains at meals.

Lanoline.—The pure oil of sheep's wool is very penetrating, and when desirous of a remedy going away down into deep parts, chloroform and any other agent should be incorporated in it and applied or rubbed in. It is so antiseptic that it never becomes rancid in the hottest weather, soothing, softening, healing; useful in burns, sprains, contracted muscles, cutaneous diseases. Dose: Spread on linen; apply twice daily.

Lantanin.—A perfect substitute for quinine; retards tissue metamorphosis; lowers temperature. It is a powerful germicide, and to kill the malaria germ, give it on the supervention of the chill. Dose: Five to ten grains, in pill form, every four hours.

Leontodon.—Dandelion root. An invaluable hepatic excitant.

Preparation and dose.—A fluid extract is the only reliable preparation in doses of from 30 to 60 drops, once or more frequent, daily.

The root of *Leptandra Virginica*, commonly called black or culvers root.

Leptandra.

Physiological action.—Excites or stimulates the liver to pour out a free flow of bile, which rouses up an inefficient intestinal action.

Therapeutical action.—Its action is mild, but causes copious black stools.

Preparations.—The fluid extract is the most eligible preparation, either alone or combined with other remedies to modify its action.

Lippia Mexicana.—Dose: Of the fluid extract from 30 to 60 drops. An expectorant and demulcent. Its merit as a pectoral remedy has been greatly exaggerated.

Liquid Ozone.—A powerful absorbent—whether administered internally or applied locally. It is used by inhalation, is unexcelled in pneumonia. Dose: Fifteen to thirty drops in water every three hours, or applied locally; keep well covered.

Lobelia Inflata.—Seeds, leaves, stem, yield medicinal properties which are expectorant, diaphoretic and in large doses emetic.

Preparation and dose.—Either an acetic or hydro-alcoholic tincture in doses from a few drops up in hot water. If for emetic purposes, larger doses to which bicarbonate of soda must be added.

Lobeline.—Glucoside.—Indicated whenever we wish the action of a powerful emetic; in minute doses it is an alterative tonic; diaphoretic anodyne; it sterilizes all microbes or disease germs; in large doses it is a safe, reliable relaxant; overcomes the spasms of tetanus, convulsions. Dose: Small doses, with copious warm alkaline solution, frequently repeated every few minutes.

Lycopus Virginicus.—Bugle weed is an excellent remedy in hemoptotic cough and irritable states of the larynx and bronchi.

Preparation and dose.—A fluid extract added to water in 5 to 10 drop doses, repeated as indicated.

Lycoperdon.—The common fungus *Lycoperdon*, commonly called puff ball.

Therapeutical uses.—A hemostatic and antiseptic to bleeding surfaces, sprinkled over bleeding wounds, it is rapid and effective in severe hemorrhages.

Lycopodium.—The yellow spores of *Lycopodium Clovatum*, commonly called club-moss.

Therapeutical uses.—A microbicide of the highest order, of great efficacy in boils, skin affections, catarrh, dysentery, leucorrhea.

Preparations and doses.—Tincture, 10 to 15 drops every three hours.

This is a saponified phenol derived from tar oils,
Lysol. or rather from creosols by the action of nascent soap. It is a liquid containing the higher homologues of carbolic acid. It differs only from creolin in possessing higher bactericide power, and on this account is preferred by dermatologists, and cancer specialists. An excellent application in lupus.

Black cohosh when administered excites or contributes to the generation of nerve force, and can be used with brilliant success in all the eruptive fevers, driving the germ to the skin; **Macrotys,** or **Cimicifuga** special utility in rheumatism; as it is a stimulant to the lumbar portion of the cord, it becomes very valuable in parturition, increasing the contractile power of the uterus.

Preparation and dose.—Tincture is the best suited for administration, in doses of from 10 to 20 drops, repeated as indicated.

Magnolia.—Germicide and diaphoretic. Useful in malarial fever. Fl. ext.; dose, 30 to 60 drops in hot water every two or three hours.

Manganese.—Black oxide and sulphate, both are highly germicidal, and act well in some cases of cancer.

German chamomile. The best preparation
Matricaria. is the comp. tincture ozonized.

This compound consists of a solution of the glucosides of the most highly ozone-generating plants so perfectly blended together as to form a great vitalizing tonic and an active scavenger to germ-laden blood.

It is indicated in all anæmic states of the brain, and great sympathetic, as in neurasthenia, paralysis, brain softening and atrophy: impaired intellect, imperfect memory, vertigo, faintness disinclination for mental and physical exertion, numbness, headache, even in structural lesions, weakness, anorexia.

It is specially indicated when the eighth pair of nerves, the vagus and pneumogastric are much weakened, as in indigestion, pains in the stomach, fullness, flatulence, eructations, constipation, jaundice, with an inactive, sluggish liver, where the bile elements, commingling with the blood, poison the brain; in gallstones—a general unstrung condition, incidental to care, worry, or to the use of tobacco, opium, whisky, chloral habits, antidotes insomnia. Has a marvellous tonic action upon the heart and lungs.

Directions for use.—Dose: 5 to 10 drops in a glass of water before meals.

Menispermum Canadense.—The root of the yellow parilla is a germicide, alterative, tonic, stimulant, resolvent. A most

invaluable remedy in microbial affections, sterilizing germs, favoring their expulsion.

The best preparation is the fl. ext. in from 30 to 60 drop doses.

Menthol. Japanese peppermint, a camphoraceous body, is a bactericide of considerable power in influenza and catarrhal affections. (*Mentha arvensis*.)

Administered orally as follows : Menthol, 1 drachm ; fl. ext., licorice, water, brandy, of each 3 ounces ; carbolic acid, 20 grains ; oil of origanum, 20 drops. Mix. Four drops every 3 hours.

For inhaling either by atomizer, spray, or other methods.

Incorporation of menthol with other methods in nasal catarrh.

Menthol cones, the crystals put up in cones, in closely fitting boxes or bottles, on account of the exceedingly volatile nature of the drug. In this form success has attended its use in headache, facial neuralgia, sciatica, by rubbing it over the affected part.

Mercury Formamide. A colorless liquid, prepared by treating ethyl formate with alcoholic ammonia ; this dissolves mercuric oxide. It must be kept from the light.

Therapeutical uses.—Most rapid and efficient preparation of mercury to kill the venereal bacillus.

Preparation and dose.—One per cent. solution for subcutaneous use. Dose, 5 to 10 drops added to water thrice daily.

Mexican Ointment.—Apply a piece, size of a bean, over hernial orifice twice daily. This celebrated ointment is prepared from gleditschin. It exerts a particularly rapid and beneficial effect on muscular fibres, causing contraction and obliterating hernial orifices, also of utility in impotency by causing a development in the erectile fibres of the penis.

Mezereum. Epispastic externally ; internally, antiseptic and alterative ; especial utility in syphilis. In the form of a fluid extract in doses of from 30 to 60 drops thrice daily.

Mitchella Repens, Fl. Ext.—Dose : One to two teaspoonfuls every three hours. A great uterine tonic and vitalizer ; resembles in its action the aletris farinosa, but far less powerful. It acts as a diuretic, tonic, and astringent.

Micromeria. Yerba Buena, or micromeria douglasii, which grows in California.

Therapeutical uses.—Aromatic, bitter tonic, alterative, very useful in atonic dyspepsia.

Preparation and dose.—Fl. extract, 30 to 60 drops added to water.

Is a typical food, contains all the elements of nutrition, should possess a specific gravity of 1036. Is a great attractor of disease germs, readily passes through the lactic and butyric fermentation.

Stomatitis, gastric and intestinal irritation, etc., are produced by milk containing lactic acid, or fungi, as *oidium lactis*, *penicillium*, *aspergillus*, etc., or pus, etc., from an inflamed or suppurating udder. These are visible under the microscope.

Tuberculosis, enteric fever, scarlet fever and diphtheria, and foot and mouth disease, find in milk a suitable medium in which their germs can grow and be conveyed.

Milk which has been kept for some time, and undergone changes of temperature, develops a ptomaine called tyrotoxine, or cheese poison; it has been detected in ice creams which have been frozen, thawed, and then refrozen.

A few drops of peroxide of hydrogen added to milk destroys all microbes as anthrax, actinomycosis, diphtheria, tubercle, scarlet fever, etc.

Monarda.—Horse mint. Bactericide. The oil yields "*monardin*," which has precisely the same properties as thymol.

Dose: A vehicle for remedies for skin disease, thrice daily. The formula for the preparation of this soap is as follows: One hundred parts of fat, 40 parts of lye (potash and soda); when saponification has taken place, 30 drops of glycerine are added. It is an excellent base for applying styrax in scabies, and such remedies as sulphur, ichthyol, chrysarobin, salicylic acid.

The bark of *Chrysophyllum glycyphlesum*, growing in South America.

Monesia. *Therapeutical uses.*—Useful in the cure of diarrhea and dysentery.

Preparation and doses.—Fluid extract, 30 to 60 drops. Mone-sine, one-fourth to one-half of a grain.

Morphia.—Dose: One-eighth of a grain in common water every four hours. Alkaloids of opium, narcotic and anodyne; very valuable, if persistently administered, in causing a *quasi* suspension of the nervous system in peritonitis,—during which the germ dies.

Moschus (*Musk*).—Ten per cent. soluble in alcohol, 50 per cent. in water. Stimulant, antiseptic, antispasmodic.

Used in nervous affections, generally convulsions, gangrene.

Dose: Ten grains, upwards, in emulsion or pill.

The bark of *Calotropis gigantea*, growing
Mudar Bark. in India.

Therapeutical uses.—A microbicide; neutralizes and kills the microbe of snake-bites; sterilizes and completely annihilates all cryptogamic affections of the skin; useful in epilepsy.

Preparations and doses.—Generally used in powdered form.

XX
 A fluid extract, or tincture, by percolation.
Muir Puama. Of great utility in all cases of impotency, or loss of sexual power. It is a decided stimulant and aphrodisiac, and is indicated in all cases of lethargy or relaxation of the genital organs, with inaptitude for sexual intercourse.

Dose: Five to 10 drops, added to water, thrice daily.

SEE THE LARGE WORK, ARTICLE, "IMPOTENCY."

The active principle of *Manita muscaria*, a
— Muscarine. fungus, termed Fly agaric.

Therapeutical uses.—Slows the heart's action, lowers temperature; in larger doses, causes free salivation, nausea, vomiting, purging, cerebral congestion. It has been greatly recommended in the night sweats of phthisis, for sterilizing the bacillus, neutralizing its ptomaine.

Preparations and doses.—Nitrate of muscarine from one-twenty-sixth to one-forty-sixth of a grain.

Musk Root.—Ozonized fluid extract of sumbul in doses of from 30 to 60 drops, every three hours, is our best remedy in epilepsy and chorea; its action is chiefly upon the medulla and cord, a vitalizing sedative and astringent, wards off the attacks, and causes their disappearance.

The leaves of *Myrcia*, growing in the West
Myrcia. Indies.

Therapeutical uses.—A volatile oil, obtained by distillation of the leaves, from which bay is made by cutting the oil with alcohol, and subsequently adding water, and percolating through carbonate of magnesia.

Used as a wash for pityriasis, and tender skin.

Myrica Cerifera.—The bark of the root of bayberry.

Is an excellent stimulant, astringent, styptic to the mucous coat of the bowels and stomach.

Preparations and doses.—Addition of 2 ounces of the ground bark to 1 pint of water, or the fluid extract in doses of 30 to 60 drops.

Dose: Ten to 15 drops, in capsules, after each
Myrtol. meal. Indicated in asthma, bronchitis, catarrh, pulmonary gangrene, glanders. It is a sure and effective germicide to all disease-germs in the respiratory tract. It

is of less density than water; its use imparts a freshness to the whole body, soothes the nervous system, increases the appetite.

Naphthalin.—Dose: From 10 to 30 grains added to some aromatic and alcoholic solution, every four hours. Being a powerful antiseptic, it is very valuable in all diseases of the bowels, typhoid fever, tubercular ulcer of the rectum. Exceedingly efficacious in bronchitis, pulmonary catarrh. Rubbed up in ozone ointment, it is very useful in scabies, ring-worm. In the form of powder, it is the best moth-destroyer known.

Naphthol.—Dose: Added to ointment; parasite skin affections. The quintessence of tar, but almost devoid of odor. It has replaced tar in all formulæ for skin-affections.

Naphthol, Benzo.—Occurs in the form of white, prismatic crystals, free from odor, insoluble in water, sparingly soluble in alcohol. It is a great intestinal antiseptic, non-toxic. It promotes diuresis, and is eliminated by the kidneys.

The initial dosage should be 20 to 30 grains, increased to 75 grains per day; children, less than half that quantity. Best given in small doses, frequently repeated in capsules, or suspended in syrup.

Napelline.—One-hundredth of a grain every three hours. Abstracted from aconite, it resembles it; less powerful in its action than aconitine.

Narceine.—One-quarter to one-third of a grain every three hours. Sometimes useful when the other alkaloids of morphia stimulate or disagree, or when they are contra-indicated.

Nux Vomica.—An invaluable, cerebro-spinal stimulant.

Preparations and doses.—Tincture and fluid extract, the dose of the former being 15 drops, of the latter 5 drops, added to water before meals.

Ngamia.—An Indian tree, possessing bactericide properties, very similar to the siegesbeckie.

Therapeutical uses.—A popular remedy throughout Asia for skin diseases,—scabies, herpes, pityriasis, ring-worm.

Preparations.—The oil expressed from the seeds is either painted or rubbed in, two or three times a day.

Prepared from the root of the white pond lily. Five to 10 grains of the active principle introduced into 50 grains of butter of coca. One every night at bedtime. Indicated. Of great efficacy in all loose, relaxed states of vagina, falling of the uterus, leucorrhea, catarrh, ulceration, etc. Never failing when the complex generative system of the female loses its tone, vigor, vivacity—where callousness has suspended enjoyment; where the sexual act is inoperative, where the vagina needs the aid of a great vitalizer and contractor.

Osmic Acid.—Dose: One-fortieth of a grain every three hours. In epilepsy, and painful, nervous affections.

Ozone et Chlorine.

(The great catarrh annihilator.)

Dose : One application of
from 1 to 2½ to 16 ounces
of tepid water sufficient
to cure the worst case of

nasal catarrh. One thorough application, not to be repeated sooner than three or four weeks. *Precautions* while using the remedy by the douche; No sneezing or blowing of the nose, because the moment the amoeba come in contact with the ozone, it paralyzes them, and they aggregate in masses or colonies, leaving their abode in the head in a thick, ropy mass.

Indicated in chronic nasal catarrh, ozæna, eustachian deafness, chronic laryngitis, asthma, bronchitis, and incipient consumption.

Before using the remedy, paint with a camel's-hair brush dipped in the fluid in its original strength the tonsils, uvula, fauces. Then use the douche in the following manner: From 1 to 2½ ounces of the compound should be added to 16 ounces of tepid water, and for the purpose of giving a brilliant, microscopical exhibition of the contents of the nasal cavity in catarrh, with its millions of disease-germs, 5 to 10 grains of permanganate of potassa should be added to each 16 ounces, simply to color. If no microscopical examination is to be made, it can be omitted. The douche or cup for the fluid should be made of maple wood, and placed on a stand eight or nine feet high. The cup is better to hold twenty ounces. The bottom of this receptacle should be perforated large enough to admit a piece of pine wood, which should protrude outwards. This, also, should be perforated, to which a fine rubber-house is attached, long enough to stretch to the ground, to the end of which a nose-piece of pine wood, large enough to completely fill the nostril, of an oblong shape, and this is to be perforated by burning a hole through it with a knitting-needle. In applying this douche, first put in the water, then the *ozone et chlorine* mixture, and add the permanganate. Patient is to be seated in a chair, with a newspaper under his chin, securing the end, and a square slop-basin between his knees, head slightly stooping, then run about two ounces or so through one nostril, which, if there is no obstruction, will find its way down the other; then change the nose-piece to the other nostril, and run through about the same quantity, changing from nostril to nostril, till it all passes through. While the fluid is running up and then down, patient must hold breath well, so as to keep it from passing down the larynx. Continue in this manner till it all passes. If there is any difficulty with the ear, and it is desirable to run the fluid up the eustachian tube to the inner ear, for the relief of deafness, then the patient must hold breath very firm, then suddenly, while the fluid is running through the nose, close the open nostril with the finger and thumb. This will draw up the fluid into the sinuses of the head; breath held well, none can go down the throat, and the superincumbent pressure in the douche will force it up the eustachian tube to the ears. In this manipu-

lation, the nose-piece must fit accurately, so as to permit none of it running down its sides. The presence of the fluid in the ear is readily recognized by the pain in that organ. The eustachian tube may be closed by disease-germs, by lymph, or it may not be pervious from collapse of its walls, and on the first effort it may not be successful; if this should be the case, rest a few minutes, and try again, raising the douche higher, and telling patient to hold breath still more firmly. If not successful at all, give it up for about a week, and make another more determined effort, and still another, before pronouncing it a hopeless case of deafness. The permeation of the tube by the fluid indicates recovery of hearing. It may have to be repeated every month for a few times. If the fluid reaches the inner ear, and the pain or distress is intolerable, an effort at emesis should be made by tickling the throat with a feather, the gagging efforts will cause the fluid to descend. If there is chronic laryngitis, with ulceration of the fauces, the back portion of the throat should be painted, or brushed over, or smeared with the catarrh fluid, in its original strength, or slightly diluted, before it is applied by the douche. During the interval of changing nostrils, and after it is completed, for several hours patient should breathe by the mouth exclusively, and sit in a stooping posture, head bent forward so as to permit a free gravitation for the discharge with its millions of amœba from the sinuses of the head.

Ceanothe Crocata.

(*Water Hemlock, Cowbane.*)

This plant is conspicuous in the cure of epilepsy, of the most intractable form, succeeding in warding off the spasms when all

other remedies have failed.

Our preparation is made from the plant, specially imported from Scotland by ourselves, and is most reliable. Properties extracted by percolation.

Dose; Variable; best to begin with small doses, 1 to 5 drops, and increase very gradually, every three hours, in water, until the spasms are warded off.

Oenothera Biennis.—The evening primrose, is indigenous to the United States.

Therapeutical uses.—A germicide. The expressed juice of the young shoots made into an ointment kills all forms of tinea. A fluid extract, in doses of from 30 to 60 drops, excellent in asthma, bronchitis, cough.

Orexin.—An appetizer, and aid to digestion. Its administration, in doses of 5 or 6 grains in the form of tablet, followed by a large teacupful of meat-broth or beef-tea, is of great utility in anorexia, anæmia, chlorosis, tuberculosis, cancer and debility.

An alkaloid, obtained by crystallization from an aqueous extract from the roots of the ouabais plant. It occurs in the form of rectangular crystals, which are slightly bitter to the taste; white, transparent.

It dissolves readily in hot water, but not very soluble in either alcohol, ether, or chloroform.

It is a bactericide, of great power; one-thousandth part of a grain administered every three hours destroys the streptococcus of whooping-cough inside of twenty-four hours.

This alkaloid has the formula, $C_{30}H_{46}O_{12}$. It acts powerfully on the respiratory centres, and is suggested for the treatment of asthma, pertussis, and heart diseases. A substitute for digitalin and strophanthin.

Oxalate, Cerium.—Dose: One to 5 grains, every three hours. In vomiting of pregnancy.

Oxalate, Cerii Liq. (*Ozonized*).—A most efficient remedy in dyspepsia, chronic gastritis, and cancer of the stomach. Dose: Fifteen to 20 drops, added to water, or some effervescing drink, repeated as indicated.

Dose: Internally. One teaspoonful, three or four times daily, in a glass of cold water, is sufficient to supply the blood with oxygen, —at least with all that it will imbibe, or in any form of blood-disease, as chlorosis, anæmia, etc.

As a gargle, in scarlet fever, syphilitic, tubercular, malignant sore throat, 1 teaspoonful in half a tumbler of tepid water, every three hours.

For inhalation, use in full strength in a hot or steam atomizer.

Compound oxygen, or oxygenized water, is a germicide, of immense power, destructive to all micro-organisms, completely annihilating the bacilli of tubercle, syphilis, cancer, fungus of diabetes, germs of scarlatina, etc. Vitalizes the blood, promotes the activity of the pink marrow and entire lymphatic system. Very efficacious in general nervous debility, nerve tire, and in debility of the respiratory organs, as in asthma, bronchitis, consumption, pneumonia, whooping-cough. An invaluable remedy for impure, impoverished, germ-laden blood, or where the blood is literally swarming with myriads of disease-germs from overcrowding, sewer gas; in embolism, bacteria-laden blood from imperfect action of the heart, lungs, liver, spleen, or skin.

Ozonized Syrup of Tar.—Dose: From a half to one teaspoonful, every three hours, or more frequent, so as to relieve cough. Indicated wherever there are bacilli, or microbes, or micrococci irritating the periphery of nerves imbedded in the highly sensitive and exquisitely organized mucous membrane of the larynx; thus it promptly relieves the cough of phthisis, by either sterilizing or destroying the bacilli of tubercle.

Dose: For external use only. Map out the **Ozone Paste.** cancer. Cover sound parts with several layers of adhesive plaster, cut a piece of table oil-cloth somewhat larger than the size of the cancer, spread it over with ozone paste one-fourth inch thick, then apply. It may remain twenty-four, forty-eight, or even seventy-two hours, but best to renew every morning till it is completely killed, or drops out, then poultice and dress as an ordinary ulcer.

Paste can be charged with ozone to any degree of strength, prepared to suit all and any special case.

This paste is the most powerful germicide ever prepared, being simply ozone gas condensed by immense pressure into an inert powder, forming a paste of marvellous oxidizing power, which has a special and peculiar affinity to unite with and chemically annihilate all disease germs, or microbes, or micro-organisms without pain or loss of blood.

Although it has a special affinity for the cancer germ, and will effectually destroy it by a process of oxidation, and convert the germ or tumor into an ozonoid or an inert body, nevertheless it is destructive to healthy tissue. What is claimed for this paste is, that it is the most powerful and least painful of all remedies ever discovered for the cure of cancer.

Ozone Tablet.—Triturate, added to a little water. After meals. Indicated in all diseases of the skin, and as a beautifier of the complexion, an aid to nutrition, a tonic to the whole intestinal tract.

Dose: From a half to 1 teaspoonful in **Ozone Water.** half a tumbler of water, every three or four hours. It is invaluable in destroying all micro-organisms or disease-producing germs in the human blood, annihilates the germs of typhoid fever, of erysipelas, of diphtheria, scarlet fever, small-pox, and other *contagium vivum*. It is of great value in all nervous diseases, cleansing, purifying, vivifying, vitalizing, and increasing renewed molecular growth of the entire nervous system. It is true brain or nerve food, vitalizing and feeding, by promoting good blood for healthy brain. It is of great utility in all derangements of the stomach; it annihilates the sarcinæ of gastric catarrh, corrects faulty nutrition, the outcome of indigestion and mal-assimilation of food, promotes gestation and lactation, and is a true physical restorer in all cases of sexual debility. See Peroxide of Hydrogen, with which it is identical in chemical composition.

Dose: Take sufficient quantity of the **Ozonized Clay.** clay, add to it cold water, and while pouring on the water, keep constantly stirring until a paste suitable for a poultice is formed, then spread on fine muslin the size of the tumor or growth. Apply for a few hours,

every day, not long enough to cause erythema of the cutaneous surface. It should be bandaged or strapped over the part. The only remedy so far discovered, that will absorb internal fibroid tumors in either chest or abdomen, or external infiltration; it causes absorption of effused lymph in true and false ankylosis; it has most marvellous power of absorption, it penetrates to internal parts by endosmosis, and softens and disintegrates. It is efficacious in all simple or malignant growths, tumors, or swellings, of great utility in infiltrated breasts, goitre, consolidation of lungs, thickening of the walls of the stomach, ovarian and uterine tumors, enlarged liver; very large tumors disappear under its influence with remarkable celerity, no matter where located.

The most efficacious ointment ever introduced. To be spread on linen, and applied two or three times daily. In-

indicated in all breaches of continuity as a dressing to protect, heal, and kill all disease-germs. The best application for wounds, cuts, bruises, burns, piles, ulcers, and cutaneous eruptions. Its action is unexcelled in the bites of insects, ivy and sumach poisoning, boils, and erysipelas. It annihilates the germs of variola on the face, nose, mouth, and throat; sterilizes diphtheric and aphthous patches in the mouth or on the nipple.

When the tubercular bacilli have invaded lung structures, it can be spread on chamois or linen, and applied over the germ colony, aiding the internal remedies in promoting the dissolution of the germs. The range of action of this ointment is immense, from the most malignant cancerous or phagedenic or syphilis ulcer, to the simple form of abrasion.

Ozone Liniment.

An unexcelled ozone-generating liniment. Two quarts of spirits turpentine, 8 ounces of gum camphor, 1 quart of aqua ammonia, 1 quart of cider vinegar, 4 ounces of dioxide of hydrogen, and 8 eggs. Dissolve the camphor in the turpentine, then add the ammonia and peroxide of hydrogen, at the same time mix thoroughly the eggs with the vinegar, then add all together. This liniment has no equal as a local stimulant in rheumatism or sprains; to all parts that have suffered a partial death.

Croton mariformis, grows in Mexico.

Pallilo.

Therapeutic uses. The leaves of the plant are a useful astringent and sedative to the pneumogastric and vagus. The seeds contain an oil which is purgative.

Preparations and doses. Tincture of the leaves 10 to 15 drops thrice daily.

Oil extracted from the seeds. Dose, 1 to 3 drops.

Pancreatin. Designed to digest starchy, fibrinous, albuminous, and fatty articles of food. It is a powerful digestant on

the stomach and in the rectum. Dose, ten to twenty grains in or with the food or sweetened milk three times daily.

A white amorphous powder, prepared from the juice of the carica papaya, insoluble in alcohol.

Papoid.

Therapeutical uses. Used as a substitute for pepsin in dyspepsia as a solvent to the diphtheritic membrane. Success has attended its exhibition in gall stones. Used in connection with boroglyceride to dissolve hypertrophied conditions of the skin, strictures, tumors. It is even capable of digesting cancers.

Preparations and doses. For dyspepsia the powder should be triturated with bicarbonate of potassa in one to three grains of each and administered after meals. The following is the formula generally given: Twenty grains of papoid; thirty grains of sugar of milk; and sixty grains of bicarbonate of soda. Mix. Make twenty powders, one after each meal in a little water. Some increase it to 5 grains. It is a great galactagogue.

For dissolving or digesting cancers papayotin, boroglyceride and water made with a lotion or paste as desired.

Paraldehyde. Indicated in weak heart and renal inadequacy. Valuable in mania, melancholia; produces quiet and refreshing sleep for several hours; causes no headache or other disagreeable sensation. Dose, forty-five to sixty grains in syrup or orange peel at bedtime, or every four hours.

They are of the greatest efficacy in all uterine diseases and are an invaluable boon to both single and married ladies if they are suffering from any disease of the womb. They positively cure whites, falling and ulcerations of the womb, induration, granular erosions, and catarrh of its neck, all forms of painful menstruation, neuralgia, dragging in the back, and every morbid condition incidental to that potent organ, the motive power of the universe. They also overcome the condition of sterility and impotency, impart great tone, strength and vigor to the sexual organs. Dose: Insert one in vagina every night. Before so doing cleanse vagina by fountain syringe charged with tepid water and castile soap.

They should be inserted when in the recumbent position. It should be inserted up the vagina as far as possible with the finger and allowed to remain; shortly after its introduction it will dissolve and come in contact with the diseased parts. The vagina should the following morning be washed out.

Discontinue the use of the pastilles during the menstrual period; when they disappear resume their use again, until the affection is cured for which they were originally used.

The passion flower is rapidly coming into very general use as one of our best and most reliable remedies in the treatment of all nervous affections.

Passiflora Incarnata. (Ozonized.) Of great utility in disorders of the great sympathetic. Its exhibition is attended with most extraordinary curative results. It is a pure nervine, either creating a higher standard of vitality, or promoting a renewal of life in the entire nervous system.

It is not a narcotic, never stupefies or overpowers the senses, but always exercises the most soothing and salutary effect, so much so, that properly administered in chorea, it controls the involuntary movements; in epilepsy, quiets and wipes out its seizures; convulsions become obliterated; headache and insomnia relieved, even paralysis, trismus, neurasthenia promptly give way. The best preparation is the ozonized fluid extract passiflora, in doses of half a teaspoonful in syrup repeated as indicated.

Pedalium Murex.—Stands next to salix nigra as a remedy in nocturnal emissions. Best used in infusion, and while using seminal emissions cease. Its efficacy is unquestionable. It is being very generally adopted. Salix nigra justifies the expectations formed of it and is our best drug if a genuine good article is used.

The alkaloid of pomegranate root bark, is
Pelleterine. an anthelmintic and promptly kills the tape worm when administered. It should not be administered to children; and to delicate ladies about half the dose should be given.

Directions.—The day before taking it patient should go on a milk diet, and the evening before a copious injection of hot water.

The next morning the full dose of pelleterine should be given in a glass of water sweetened.

One hour after the pelleterine, a purgative must be administered, and if it does not operate in one hour another administered with an injection of warm water with 30 grains of sulphate of soda.

Virginia stone crop, indigenous to the
Penthorum Sedoides. United States.

Therapeutical uses.—It is a tonic astringent, and a highly vitalizing agent to all nervous membranes, especially the entire intestinal tract. Of great efficacy in weak, relaxed, ulcerated states of the bowels, especially the rectum, also in chronic nasal catarrh and ulcerated sore throat.

Preparations and doses.—The fluid extract in doses of 20 to 30 drops every three hours.

Pepo.—Pumpkin seed. Parasiticide. From one ounce to one ounce and a half of the crushed seeds, excellent for the removal of tape worms. An ethereal extract and oil are also used.

Pepsin. Pepsin is a light, brown yellow powder prepared by drying under 100° F. the fresh lining of the stomach of pig, sheep or calf.

Therapeutical uses and action.—Pepsin is one of the important elements of the gastric juice, reducing the albuminoid and protein constituents of the food to a fit state for absorption. Besides it is a stimulant to the gastric mucous membrane. Useful in all cases of atonic dyspepsia, anemia, diarrhea, mal-nutrition.

Scale Pepsin.—A solvent to diphtheritic membrane.

Pepton.—This is digested meat, free from all extraneous bodies, absorbed into the blood without needing digestion; can be given by mouth or rectum. Dose, sixty grains in milk every four hours.

Perosmic Acid.—An acid from the metal osmium. It has an extremely pungent odor; acrid taste; soluble in alcohol and ether.

Therapeutical uses.—It is thought to be of utility in sarcoma, enlarged cancerous glands, and neuralgia.

Preparation and dose.—A one per cent. solution, one to three drops used hypodermically.

Permanganate Potass.—Emmenagogue, kills microbe of snake bites and the fungus of diabetes. The best preparation of manganese. Dose, one-half of one grain in water.

Peroxide of Hydrogen. Negative ozone is a colorless, transparent liquid of a syrupy consistency, as now prepared is a stable product, but if permitted to remain in a watery solution undergoes decomposition.

(H_2O_2 .) In full strength when applied to the skin it whitens it, but when diluted it is bland, unirritating.

The use of this agent is merely another source to obtain oxygen in a different form from a gaseous state. It is a definite compound of oxygen and hydrogen. A 15 volume solution, being equivalent to a two or three per cent. solution, yields 500 times its own volume of oxygen.

Whether inhaled or applied to the tissues it evolves free oxygen, and is the most powerful of all bactericides, none can excel in microbicide action. Administered internally from 5 to 30 drops in distilled water every four hours, it is the great scavenger to germ-laden blood. Kills the microbe of dyspepsia, the fungus of diabetes; the streptococcus of diphtheria and erysipelas. Injected into boils and abscesses it promptly destroys the pus germ. Perfectly innocuous to healthy tissue, but whenever a microbe exists it promptly annihilates it. In sprays, douches, lotions, gargle, however applied, it sweeps all microbial life be-

fore it, hence its utility in ulcers of all kinds, carcinoma, venereal. Injected into a polypus it at once causes its death.

Glucosone is simply a solution of the dioxide of hydrogen in c. p. glycerine, which is an excellent form for internal use.

It has also been utilized in the form of baths for leprosy, syphilis, and other cutaneous diseases. Instantly promotes primary unions in wounds by destroying the bacteria.

The internal administration of the peroxide of hydrogen prior to an operation fortifies the patient against the shock by the super oxygenization of the blood.

Petroleum.—Rock oil, Possesses strong microbicide properties; in its crude state kills the gonococcus of gonorrhea, internally in pill form, locally as an injection.

This is a slightly reddish, inodorous and tasteless powder, soluble with difficulty in water, a little more soluble in glycerine, still more so in alcohol; it is insoluble in acids, except glacial acetic.

Though absolutely tasteless, it is most conveniently administered in capsules, this method admitting of the most accurate dosage.

Used in pyrexia, neuralgia, etc.

The most satisfactory dose for an adult is eight grains, which can be repeated.

Phenic Acid.—Locally. A ten per cent. solution or injection in the centre of a hemorrhoidal tumor or pile immediately causes it to wither and disappear. The following formula is esteemed excellent, and is used in the same manner: Glycerine, two and a half drachms: phenic acid, twenty drops; morphia, 5 grains. Mix. A few drops injected into any pile causes it to painlessly disappear.

Phrenosin.—This substance is prepared from kephaline, a white, tasteless, odorless crystal. (See Kephaline, a brain essence.) Dose, a few grains with food three times a day.

Phloridzin.—Excellent tonic for dyspepsia in delicate ladies or debilitated children. Its action is very similar to the cinchona alkaloids. Dose, ten to twenty grains once or twice daily.

Phytolacca. States. Poke root, indigenous to the United

Therapeutical uses.—A valuable drug, kills the microbes of cancer, syphilis, tubercle. Alone, or better still, combined with iodide potass.

Next to saxifraga the best vegetable alterative in the *Materia Medica*.

Preparation and doses.—The ozonized fluid extract of phytolacca, teaspoonful doses; the tincture 15 to 20 drops.

Pichi, Fl. Ext.—Indicated in all affections of the urinary organs; especially useful in all catarrhal states of the bladder,

prostate. It is the primary agent in the uric acid solvent. In that formula it allays irritation, causes the disintegration and expulsion of calculi in the uric acid diathesis. Dose, from a half to one teaspoonful every three hours.

Pierate of Ammonium.—Annihilates the malarial germ; it has many advantages over quinine, producing no unpleasant effect, no headache, no deafness, nor tinnitus. Dose, from one-eighth to one and a half grains in pill form four times a day.

Picrotoxinum.—Useful in epilepsy, chorea; locally ten grains to the ounce or vaseline in ringworm, parasitic affections of the skin. Dose, one-fiftieth to one-tenth part of a grain every three hours.

Piperine.—Indicated whenever the germ malarial is in the blood; excellent germicide. Dose, one to two grains as indicated.

Piperonal.—Of great efficacy as an antipyretic and antiseptic. Dose, five grains every three hours.

Piscidin.—Sedative. Dose, one-thirtieth to one-fiftieth of a grain every three hours.

Ptyalin.—Indicated in all cases of dyspepsia. Dose, ten to twenty grains mixed in food every meal.

Peiocarpinal Hydrochlorate.—Alkaloid of jaborandi. Dose, one-eighth of a grain.

All varieties of the pine tree are in the true sense of the term ozone generators or breeders; splendid bactericides; grow luxuriantly all over the world.

Therapeutical uses.—Both local and internal in rheumatism, paralysis, skin diseases, chronic catarrh, laryngitis, bronchitis.

Preparations and doses.—The volatile oil is used internally in doses of 16 drops. In inhalations it is mixed with the carbonate of magnesia and water.

A fluid extract is used for baths in rheumatism.

Turpentine ozonized for peritonitis; terebene for coughs, 8 to 10 drops on sugar.

The white rosin pulverized with cream of tartar is efficacious; wool or wadding saturated with it relieves the pain of rheumatic oints.

A synthetical compound in the form of crystals, readily soluble in water, has been pushed upon our market as a solvent for uric acid in blood and tissues. Extensive clinical experience has shown it to be neither an irritant nor tonic agent, and of very little value—much inferior to all the uric acid solvents in the market.

Dose.—16 grains thrice daily in lithia water—the latter may be of some value.

Piscidia. Jamaica dogwood, the bark of *Piscidia erythrena*.
Therapeutical uses.—It is a very superior narcotic, its glucoside being piscidin, which acts on the sensory gland of the spinal cord. Employed internally and locally in toothache and neuralgia of the 5th pair. Equal to chloral hydrate and bromide of potass in delirium tremens. A splendid sedative in asthma and bronchitis, and for allaying pain, spasm, and nervous excitement generally.

Preparation and dose.—Fluid extract. Dose: Thirty to 60 drops.

Physostigma.—Calabar bean. Spinal sedative, used in tetanus, asthma, epilepsy.

Preparation and doses.—Tincture, fluid extract, alkaloid *eserine*. Five drops of tincture, 1 drop of the extract. The salicylate has the same medical properties. Dose: Uncertain.

Plantago.—Our common plantain seeds and leaves, are antiseptic.

Therapeutical uses.—The seeds are valuable for dysentery and hemorrhages; the green leaves are a discutient for buboes and swellings.

Preparations and doses.—Decoction and fluid extract.

Platinum, Chloride.—Dose: One-thirtieth of a grain triturated in sugar of milk, thrice daily. Useful in syphilis.

Podophyllotoxin.—Dose: One-half to 1 grain, as indicated. Cholagogue, should never be administered alone, as it is a violent irritant. Combine with leptandra, hyoscyamus, taraxacum, nux or bitartrate potassa.

The root of mandrake is an

Podophyllum Peltatum. excitant to the glandular system generally, but a very powerful stimulant to the liver, causing a great increase of flow of bile. Great caution should be exercised in its administration, never given alone, but with some agent to modify its action, and in small doses.

Preparations and doses.—Fluid extract, with either hyoscyamus or bitartrate potassa. Dose: Three to 5 drops, thrice daily.

Polymnia Uvedalia.—Bearsfoot, is specially valuable in all cases of enlarged spleen.

Dose: Fluid extract, 30 to 60 drops.

The bark of the white poplar
Populus Tremuloides. is a tonic to the stomach, bowels, bladder, urethra. Exerts a most correcting influence in all states of mal-nutrition, or imperfect assimilation; hence of utility in chronic debility of the gastric and intestinal mucous membrane. Very useful in diabetes.

Preparation and dose.—Fluid extract in 30- to 60- drop doses.

Ptelea Trifoliata. [‡]Water-ash; a shrub, indigenous to the United States.

Therapeutical uses.—Of great efficacy in laryngitis, catarrh, bronchitis, and especially in asthma.

Preparation.—Fluid extract, 10 to 30 drops, given at stated intervals.

Protagon. Dose: Ten to 30 drops of the liquid, 1 to 8 grains of the crystals after meals, every three hours. This remedy is indicated in all states of nervous bankruptcy. It is both in liquid and crystalline form, containing nitrogen and phosphorus. It does not differ chemically from kephaline. It is called protagon, as it was the first definitely ascertained specific constituent of brain.

Indicated. For the cure of tuberculosis, pneumonia, bronchitis, Bright's disease, diarrhea, (*Ozonized.*) night-sweats, hemorrhages, profuse expectoration, sore throat, leucorrhea, vaginal disease and dyspepsia.

The value of this preparation consists in its containing a larger per cent. of free hydrocyanic acid, which thus gives a full percentage of tonic properties, and it is highly germicidal.

Dose: From a half to 1 teaspoonful, every two or three hours.

Prunus Virginianus. The bark of the wild cherry. Is a tonic, stimulant, and sedative.

Physiological action.—As it contains hydrocyanic in a natural state, it is sedative to the pneumogastric and vagus, hence subdues irritation of the lungs, gives tone to the pulmonary tissue, excellent in pulmonary tuberculosis.

Preparations and doses.—Fluid extract or, better still, prunia, specially prepared, are most excellent preparations. Teaspoonful doses.

Pyoktanin. A so-called pus-destroyer, a term introduced by a German chemical concern to cover two agents (aniline, blue and yellow), which they vaunt as specifics for all forms of bacterial disease. In their efforts at introduction, they have subsidized the American medical press to boom their dyes, which are contra-indicated, among all English-speaking nations, as they are toxic to all healthy tissues, and potent heart-paralyzers.

Pyrocin.—Dose: Five to 10 grains, frequently repeated, is a powerful, arterial sedative; in all fevers it has a remarkable, sterilizing action on micro-organisms,—the factor of the fever; lowers heat, slows pulse and respirations; it is safe, prompt, energetic,

Quassin.—Dose: One-sixth of a grain every four hours. A crystalline, bitter principle, from quassia tonic, antiseptic and parasiticide.

Quebracho. The bark of *Aspidosperma quebracho*, growing in the Argentine Republic.

Chemistry.—Numerous alkaloids have been isolated.

Physiological action.—An anti-pyretic; slows the heart, lowers temperature. Affords great relief in difficult breathing associated with asthma, emphysema and organic cardiac disease, especially in atheroma and degeneration of the heart-muscle.

Preparations and doses.—The fluid extract, in from 30 to 60 drop doses. Most of the alkaloids are unreliable.

Quillaja, Saponaria Tooth Wash (*Soap tree bark*).—Makes an excellent tooth wash, destroys all microbes in, on and around the teeth and gum. (*See Saponine.*)

Dose.: A few drops, added to tepid water, after meals.

Quinine Flower.—Has very nearly the same properties of the cinchona bark, but in a less degree. *Dose*: Fluid extract, from 3 to 60 drops, every three hours.

Quinine, Arseniate (*Hydrobromate, Salicylate, Valerianate*)—Each combination modifies its physiological action; valerian renders it a nervine; arsenic increases its germicidal properties; salicylate, its anti-zymotic properties; opium or tannin, its anti-periodic properties.

Quinine, Sulphate.—Tonic, increases the action of the lymphatic system and pink marrow, favors the elaboration of red blood, and is inimical to all microbes in that vital fluid.

Dose.: One to 30 grains, dissolved by the addition of a few drops of aromatic sulphuric acid, and added to water, as indicated.

When chemically pure, occurs in white, shiny needles, having little taste or smell. It is obtained from resins by the action of fusing alkaloids.

Therapeutical uses.—A powerful germicide, destroying the microbe of diarrhea, whooping-cough, the germs of malaria, erysipelas.

It is useful locally in the treatment of epithelioma lesions, as it exerts a powerful annihilating effect on recent germ formations.

By inhalation, or in topical applications of a 1 per cent. solution applied to the throat, it destroys the micrococci of whooping-cough.

Doses.: Freely soluble in water, ordinary doses 5 to 15 grains every three hours.

Resorcin, Theo.—A derivative of resorcin; a yellowish, gray, insipid; insoluble in water, and very sparingly soluble in alcohol and ether; has been pushed forward as a substitute for iodoform in chancres, but its use is not to be recommended as it often produces untoward results.

Rhamnus Frangula.—Common names, Black alder or Buckthorn.

Therapeutical doses.—A tonic, laxative, acts efficiently upon the liver.

Preparations and doses.—From 30 to 60 drops.

Rhigolene.—Useful as a local anæsthetic. Apply with ball atomizer; freeze small portions of the skin and subcutaneous tissue for incisions and minor operations.

Rhus Aromatica.—Indigenous to the United States.

Therapeutical uses.—It possesses valuable astringent properties and has been used with good success in diabetes, phthisis, hemorrhages, chronic cystitis, and diarrhea.

Preparations and doses.—Fluid extract, 5 to 20 drops, every three hours.

Rhus Glabrum.—The bark of sumach. Is an astringent tonic and antiseptic, and of great utility in the treatment of tubercular diarrhea.

The fluid extract, in doses sufficient to control it.

Rubus Villosus.—The bark of the root of the common blackberry.

Therapeutical uses.—Tonic; astringent; employed with great advantage in diarrhea dependent on a relaxed state of the bowels.

Preparations and doses.—The best form is a fluid extract, 20 to 30 drops, repeated frequently.

Rumex.—The root of the common Yellow dock; possesses tonic, astringent, germicide properties. Acts efficiently on skin, throat, and liver.

Preparations and doses.—Fluid extract, in from 1 to 2 teaspoonfuls, every three hours.

Sabatia, Campestris.—Dose: Thirty drops, every three hours. Of utility as a tonic and anti-periodic.

Saccharine.—Diabetes. The syrup is thus made: Dissolve 10 parts of saccharine, 12 parts of bicarbonate soda in 1000 parts of water, at a temperature of 80° F.

Dose: Thirty to 75 grains in water, every three hours.

Salicylate, Lithium.—Indicated in gouty and rheumatic synovitis.

Dose: From 20 to 30 grains, every three hours.

Sandal Wood Oil.—A specific remedy in gonorrhea.

Dose: Fifteen to 25 drops, added to sugar of milk, every three hours.

Indicated in all cases

Slol or Salicylate of Phenol. of rheumatism; insoluble in water or in the juices of the stomach, it passes the pylorus, undergoes decomposition in the duodenum, where it assumes the compound of salicylic acid and phenol, neutralizes or renders inert the lactic, butyric, and uric acids; its germicidal properties are immense, and it is

of very great efficacy in chronic urticaria, in sub-orbital neuralgia, as an antipyretic, in diabetes, in intestinal catarrh, in typhoid fever, in cholera, against intestinal parasites, in catarrh of the bladder, in ozæna, in otorrhea, as a local application in gonorrhea, and as a mouth-wash. It may be designated the great, intestinal disinfectant. Its chemical composition is 40 per cent. of phenol and 60 of salicylic acid.

Salipyrin.—This is a combination of salicylic acid and antipyrin, 57.7 parts of the former to 42.3 of the latter. It forms a white, odorless powder, insoluble in water, but freely soluble in alcohol. It is a microbicide, esteemed by some physicians as being efficacious in acute rheumatism.

Dose: From 2 to 20 grains, every two hours, according to the condition of the heart.

Sambucus.—Elder; a bactericide. Decoction of the flowers completely sterilizes the streptococcus of erysipelas; simmered in lard, makes an invaluable, antiseptic ointment for healing old ulcers, especially rectal; the juice of the berries sterilizes the amylobacta of rheumatism; the inner bark in infusion is of great efficacy in rheumatism.

Sandal Wood Oil.—In doses of from 5 to 15 drops, or even up to 30 drops, dropped on a lump of sugar, of utility in some cases of gonorrhea.

Sallein.—Alkaloid from the different species of willows. All are tonic, bactericide.

Dose: Variable, from 5 grains up to 30 grains.

Black willow; bark and buds. Bactericide,

Salix Nigra. tonic, astringent, vitalizing.

Properties.—A sexual sedative, of the highest order. Its administration overcomes all conditions of hyperemia of the ovaries, uterus, prostate, testes, consequently of the greatest possible utility in so called hysteria, in all forms of diurnal and nocturnal emissions, in spermatorrhea and prostatorrhea.

Preparations and doses.—Fluid extract, in doses of one-half and one teaspoonful, thrice daily; the glucoside has been made into urethral bougies, which have also proved themselves of great value in spermatorrhea.

Salicylic Acid
and
Soda.

Bactericides; of great efficacy in rheumatism, diarrhea, and other microbial affections. Sterilizes and kills the microbe, the factor of morbid action, so temperature lowers, heart's action slows. The

best preparations are those made from the oil of wintergreen.

Dose: Variable, from 5 to 20 grains, either in capsules, or liquor ammonia acetatis.

Salvine Dentifrice. Prepared from soap tree bark, boroglyceride, and negative ozone, made into a delicately-scented paste. It is an antacid, astringent, and microbicide. A small piece added to tepid water, used as a mouth-wash or gargle, kills all germs in the oral cavity. Keeps it sweet and aseptic, whitens and preserves the teeth, and prevents their decay.

Sanguinaria. The rhizome of *sanguinaria canadensis*, or blood-root, grows most luxuriant in all parts of the United States, being one of the earliest if not the most beautiful, of spring flowers. It contains *various alkaloids*.

Therapeutical uses.—Of utility in coughs, colds, catarrh. It has acquired quite a reputation in the destruction of the microbe of croup in the form of an acetic syrup.

It affords good results in atonic dyspepsia, with catarrh of stomach and bowels.

Preparations and doses.—The fluid extract, from 5 to 10 drop doses.

Sanguinarin.—A valuable, stimulating expectorant and antiseptic; small doses frequently repeated are best.

Dose: One-eighth to one-twelfth—one-sixth to one-fourth of a grain, every four hours.

Santonine. Destroys worms (*lumbricoides*); is a tonic of rare value. The action of air and light destroys its properties, renders it yellow; so see to it that it is in white, colorless crystals. In small doses it has a peculiar vibrating action upon the nerves of organic life and those of nutrition, increases the appetite; under its use patient gains flesh; it stimulates the ovaries, and is an emmenagogue, and microbicide.

Dose: One grain dissolved in warm water for worms; as a tonic, one-quarter or half a grain, form of a lozenge, every other night, followed by comp. syr. rhubarb and potassa following morning.

Saponine.—This glucoside is found both in senega and soap tree bark (*quillaja saponaria*), and has the property of emulsifying oils when added to them.

It is an important remedy to make emulsions for the administration of turpentine or eucalyptus.

Sarracenia, Fl. Ext.—Destroys or sterilizes the germs of variola.

Dose: Sixty drops added to warm tea, every three hours.

X **Saw Palmetto, Fl. Ext.** Indicated wherever a nutrient tonic is desired, but its great use in the animal economy is to promote the growth of important glands, as the breasts, ovaries, prostate, testes. If judi-

(Ozonized.)

ciously administered for some months, it will cause those glands to grow, and become immensely large, even after they have dwindled into nothingness, so it is of intrinsic value in atrophy of the mammæ, testes, ovaries.

Dose: From a half to 1 teaspoonful, every three hours.

An herbaceous, perennial plant.

Saxifraga.

Therapeutic uses.—A bactericide of the first order. When administered, it kills the bacillus of cancer, syphilis, and tuberculæ. The compound syrup composed of saxifraga, blue flag, tag alder, bitter-sweet, corydalis, poke root, and aromatics. Each fluid drachm, contains 5 grains of iodide of potassa and 5 grains of chlorate of carbon, subjected for a week to twelve atmospheres of ozone gas. Is generally used in doses of 1 teaspoonful, three times a day.

Sclerotic Acid.—Same properties as ergot, from which it is obtained.

Dose: One-thirtieth to one-fiftieth of a grain, every four hours.

Scopoleine.—Local; eye, as indicated. An alkaloid from *scopolia japonica*—in other words, Japanese belladonna.

Commonly known as scull-cap, grows over

Scutellaria. the United States.

Therapeutical uses.—It is a nervine, of the first class. It can be administered, dose after dose, until a *quasi* paralysis of both motor and sensient nerves is produced—a state of nerve-rest without death, during which vital recuperation of the nervous system takes place. It is, therefore, an invaluable remedy in the nerve storm of epilepsy and chorea; in the coagulated brain of chronic alcoholism; in motor paralysis; insanity.

Preparations and doses.—A decoction of 2 ounces of the herb to 8 ounces of water; fluid extract, 1 to 2 drachms; administered frequently so as to almost completely suspend nerve-circulation.

Senecio Gracilis.—Life root; especially useful in defective uterine function, arising from a vitiated state of the system.

The fluid extract, in doses of from 30 to 60 drops, is our best preparation.

Serpentaria.—Virginia snake-root; stimulant, tonic, diaphoretic, antiseptic.

Most useful remedy in all fevers, and in cases of debility, dyspepsia, sore throat, etc.

Local; paint on as indicated.

Siegesbeckia, Tincture.

Stimulant; parasiticide; useful in ring-worm. The following formula is generally used: Fluid extract. *Siegesbeckia*, 1 ounce; salicylic acid, 30 grains. Mix. Apply with a brush. Equal parts of the same fluid extract and glycerine. Shaken up well, rubbed in over any patch of tinea, at once kills plant, spores and broods. Internally, it has acquired quite a reputation in destroy-

ing the bacillus of typhoid fever and other microbes. It has a wide sphere of action, both locally and internally, as a bactericide. It acts as a microbicide in aphthæ, gangrene, bed sores.

One drachm of the tincture to 2 drachms of syrup forms a powerful alterative. Equal parts of this syrup of siegesbeckia and fluid extract of hydrocotyle form the transcendental alterative of the ancients. Drachm doses, thrice daily.

The tincture, added to water, is administered in chorea, stammering and other nervous diseases, in doses of from 5 to 10 drops, which is an ordinary dose in all cases.

Silphium.—Rosin weed; is of utility in asthma and pulmonary affections.

Dose of the fluid extract, from 10 to 20 drops, as indicated.

Simabieidia.—Indicated in neuralgias or headache, if due to non-aeration of blood, as in pneumonia and bronchitis, or due to the inhalation of toxic gases, as sewer gas, malarial emanations; of great utility in all cases where a living poison circulates in the blood.

Dose: From half to 1 teaspoonful, added to water. If urgent, every hour; for general use, every four hours.

Simulo.—Exerts in some few cases of epilepsy a sedative action.

Dose: From 1 drop up to 20, or over.

Sodium Benzoate.—Useful in all infectious diseases. It destroys the germ, and thus lowers heat, pulse, respiration.

Dose: Four to 5 drachms, in Seltzer water, at intervals during the day.

Sodium, Ethylate.—Local application. Indicated in polypus.

Sodium, Nitrate.—Chorea and epilepsy. *Dose*: Five to 10 grains, in syrup, every three hours.

Sodium, Sulpho-Carbolate.—Diphtheria. See sulpho-carbolate sodium.

Dose: Fifteen to 40 grains, internally, and applied locally few hours.

Indicated in the preven-
tion or ingress and destruc-
tion of the oidium albicans

Sodium, Sulpho-Carbolate. of diphtheria, the microbes of small-pox, the bacteria-vibrio of puerperal fever, the bacteria of erysipelas, and boils, and all forms of rectal ulcer caused by eroding germs. It renders the blood aseptic, making that fluid a habitat into which no disease-germ will enter while the patient is taking that drug.

Dose: For children, one to 2 grains; for adults, 3 to 4 grains; added to water or dry on the tongue or rectum, every four hours.

Solidago-Odora.—A bactericide; aromatic stimulant.

Solanin.—May be given in all cases where morphia would be given—to procure sleep, to calm excitement, relieve pain, overcome spasm.

Insert in urethra every night. Three varieties serviceable: First, to kill the gonococcus; Second, to arrest seminal leakages; Third, to rouse up erections in profound impotency. To insert one after urinating, and allowing it to dissolve direct, immediate cure of a recent gonorrhea; of marvellous efficacy in checking all leakages or seminal losses; as a remedy in impotency they have no equal; imparts to the virile organ all the force and ardor of youth.

To kill the gonococcus, the thallin or iodol bougie is preferred; to arrest leakages, the salix niger; to dissolve strictures, papoid or trypsin; to excite or stimulate erections, damiana.

Somnal.—A hypnotic; a definite, chemical combination of chloral hydrate and urethan; induces sleep, when administered, by its direct action on the brain; the combination does not offer any appreciable advantage over the combination of chloral hydrate and bromide of potassa in syrup of orange peel.

Sparteine Sulphate. Its administration causes an increase in the force and frequency of the heart's beat.

An excellent remedy in atrophy, atony, or weakness of the heart.

Sulphate of sparteine is indicated in all cases of enlarged, flabby heart. It increases its vital stamina. It also has a marked diuretic action.

Dose: One half to 1 grain, thrice daily.

Squills, Syrup. Indicated wherever an expectorant is demanded. It is invaluable alone, but of the greatest efficacy when combined with syrups of tolu, senega, ipecac, and wild cherry, as it yields its properties to dilute acetic acid, if thus combined, promotes the absorption of effused fluids in dropsy, but generally used to facilitate expectoration.

Dose: Thirty to 60 drops, every three hours.

Seillitine (*Alkaloid from Squills*).—Same as squills.

Dose: One-sixtieth of a grain, every three hours.

Stigmata Maidis.—The green pistils of the corn silk.

Therapeutical uses.—An excellent remedy in all affections of the mucous membrane, in nephritic colic, vesical catarrh, and a diuretic.

The roots of *Stillingia sylvatica*. Queen roots.

Stillingia. Grows freely from Virginia to Florida, flowering in May and June. The root is the part used.

Therapeutical uses.—This remedy may be classed third in the classifications of vegetable alteratives and bactericides: 1. *Saxifraga*; 2. *Phytolacca*; 3. *Stillingia*.

A good alterative, well adapted for mild cases of syphilis.

Preparations and doses.: The compound syrup, made as follows: Rad. *Stillingia sylvatica*, Rad. *Corydalis Formosa*, Rad. *Phytolacca Decandria*, Rad. *Iris Versicolor*, Cort. *Xanthoxylum Fraxineum*, Fol. *Chimaphila Umbellata*, Sem. *Cardamomum*. The best preparation, in teaspoonful doses, every three hours.

Of great utility in catarrh of the
Stone Crop Virg. stomach and bowels; almost identical with stone root and bayberry.

Of all remedies it is decidedly the best in all forms of ulceration of the bowels, especially when the rectum is implicated. It has a most extraordinary, vitalizing action upon all mucous membranes.

Dose: Fluid extract, 30 drops.

Strophanthus Tincture.—Increases the contractile power of all striped muscles—renders their contraction more complete.

Dose: Four to 10 drops, every four hours.

The systole of the heart is increased and its contractions slowed by small doses of this remedy. The
Strophantin Alkaloid. action of both preparations are exceedingly beneficial. A constant and rapid subsidence of the heart's action is brought about in a few minutes by its use. Both tincture and alkaloid are best given in laurel water.

Dose: One-sixtieth to one hundred and twentieth of a grain, every four hours.

Stylosanthes, Fl. Ext.—Given to prepare the uterus for labor, and also to relieve after-pains.

Dose: A few drops, added to hot water, every few minutes.

Strychnine.—Tonic; spinal stimulant; valuable in dyspepsia, constipation, debility, incontinence of urine, sexual debility, tetanus, chorea, epilepsy; camphor antidotes, large doses.

Dose: One-twentieth to one-fiftieth to one-hundredth of a grain, every four hours.

Sulphonal.—In doses of from 30 to 45 grains, is a safe and reliable hypnotic from all deleterious effects. As it is somewhat insoluble, it is a good plan to spread it on a piece of bread and butter; better still, dissolve in boiling water, keep stirring till cool enough to swallow. It is a remarkable bactericide, having a special affinity for the microbe of neurasthenia, hence its posi-

tive efficacy in the insomnia of the insane or neurotic; in old age; in organic cerebral lesions; in delirium tremens; in pernicious anæmia. It is a much safer remedy than chloral hydrate, paraldehyde, amylene hydrate. If used in pulmonary tuberculosis, smaller doses at bedtime arrest the sweats, and procure most refreshing sleep.

Sulphur Water. For fevers: Administer one-half teaspoonful, every hour; during convalescence, every three hours. For sarcinæ ventriculi: One teaspoonful, two hours after meals.

For piles and diseases of the liver: A teaspoonful, every three hours. For all skin diseases: Add 1 or 2 tablespoonfuls to 1 pint of water, saturate cloths, and keep constantly moist. Every hour the remedy should be used. This remedy being antiseptic, germicide disinfectant, has a wide range of action, and can be used with decided success in all diseases in which micrococci or disease-germs play a primary part, as measles, scarlet fever, small-pox, diphtheria, typhoid, etc.; in the sarcinæ ventriculi; in all parasite and vegetable cutaneous diseases; in all diseases of the liver and alimentary canal.

It acts as a scavenger to germ-laden blood and exercises a curative action upon all the higher functions of animal life, which it vitalizes; whereas it is destructive to microscopic life.

Suppositories. Indicated in all cases where there is poverty of nerve force and weakening losses of the generative organs, nervous debility, tire, worry, melancholy, exhaustion, sleeplessness, disturbances and palpitation of the heart, prostration, sensitiveness to change of weather; pain in back, shoulder, or side; anæsthesia or hyperæsthesia of the skin, complete impotence, etc.

(Cocaine.) This suppository positively cures spermatorrhea, continence or incontinence of the urine, sterility and impotency, inflammation and enlargement of the prostate, chronic cystitis and catarrh of the bladder, piles, stricture of rectum; will absorb rectal tumors and cure dysmenorrhea or painful menstruation, neuralgia of womb, metritis, cancer of rectum. It is of special value in rectal ulcer of phthisis and that of the insane.

Dose: Insert one at bedtime; push it up full one inch and a half over the prostate in males.

Syzygium Jambolanum.—The tree, *Syzygium jambolanum*, has been highly praised as a remedy, which will arrest the formation of glucose. Destroys the fungus of diabetes. The pulverized root, introduced into capsules, containing 5 grains or more each, is taken immediately after eating.

Thallin. Very powerful antiseptic; lowers heat, pulse, respiration, more effectually than antipyrine or kairne. Makes an

abortive injection in gonorrhea, destroying the germ in all cases. Dose, four to ten grains every three hours.

Thalline. (Sulphate and Tartrate.) Same as above. Kills all microbes; one-half per cent. solution destroys the gonococci of gonorrhea.

Terebene. From 5 to 8 drops on a lump of sugar, which is permitted to dissolve and diffuse itself in the mouth, fauces, and upper portion of the bronchi.

It is a good remedy to palliate the urgent symptoms of bronchitis, asthma, and incipient tuberculosis.

Terpine. Useful in neuralgia and epilepsy. Dose, fifteen, thirty, and up to sixty drops, as indicated.

It is prepared by the action of nitric acid on oil of turpentine in the presence of alcohol. It is in the form of large, tasteless, and inodorous crystals, soluble in 200 parts of water, and in about 7 of alcohol. In its action it is somewhat similar, but more active, than oil of turpentine. It has been recommended in bronchial affection, as an expectorant, in the dose of $\frac{3}{4}$ to $1\frac{1}{2}$ grains. In larger doses, 3 to 10 grains, it is said to suppress expectoration, and may be used in bronchorrhea. It is best given in a weak alcoholic solution, and may be mixed with a suitable syrup.

Terpinol. Especially useful in bronchial affections, increasing the fluidity of the sputa and relieving cough.

Dose: Five to ten grains every three hours.

Tetroxide Osmium. (*Osmic Acid.*) For neuralgia and to promote absorption of tumors.

A one per cent. solution hypodermically, as indicated.

Thiocamp. A disinfectant, composed of camphor and sulphurous acid. It may be employed in a pure state, or dissolved in alcohol, in which it is readily soluble.

A stearoptene contained in thymus vulgaris.

Thymol. *Therapeutical use.*—An excellent bactericide.

Preparations and doses.—Thymolodyne, an efficacious germicide. Each fluid drachm contains one-sixteenth of a grain of thymol; one eighth of a grain of carbolic acid. With boroglyceride, gr. 10; benzoic acid 5 grains; syrup of tolu one drachm. Mix. Give at a dose.

Solution of thymol for spray; thymol jelly to disinfect the hands; pastilles; ointment.

Tin Oleate. For reedy finger-nails; makes them smooth and gives them a high polish. Local; apply several times a day, but chiefly at night.

Tolu.*Comp. Ozonized Syrup.*

Composed of balsam of Tolu and Peru, and dioxide of hydrogen and resorcin. Has been found of great utility in malaria, scarlet fever, diph-

theria, bronchitis, and other maladies dependent upon the presence of a disease germ.

It is an active microbicide, promptly arrests those fearful disorders of defervescence by annihilating the disease germ and neutralizing its ptomaine.

Dose: From a few drops up to one-half a teaspoonful frequently repeated.

Tonga. Tonga is the name given to a fluid extract of a special combination of the roots and leaves of several plants.

Therapeutical uses.—Introduced for intense neuralgia. Its efficacy has been well tested by competent authority.

The blossoms of the red clover. Stands in **Trifolium.** the sixth order as an alterative and bactericide.

The compound fluid extract is prepared from stillingia, burdock and poke roots; berberis, aquifolia, cascara amarga, and prickly ash, with five grains iodide potassa, is administered in teaspoonful doses every three hours.

Trillium Pendulum. The root of the common berth-root, is a uterine tonic and restorative. Its action is the same as the aleteris farinosa.

Fluid extract in doses of thirty to sixty drops every three hours.

Trimethylamina. Of utility in rheumatism and chorea.

Dose: Five to ten grains every four hours.

Trumpet Plant. As astringent, possesses most extraordinary power in the cure of diarrhea.

Trypsin. The fibrine digesting principle of the pancreatic juice, especially prepared as a solvent for diphtheritic membrane. Local use; apply by a brush or atomizer, once; repeat.

Tulipine. Identical with colchicum.

Dose: one-twelfth to one-thirtieth of a grain every four hours.

Ulexine. Useful in cardiac and kidney trouble; strengthens and tones. One-fourth of a grain every three hours.

Whether within or without the body, all

Turpentine. the preparations of turpentine are great ozone generators. The liberation of this agent is inimical to microbic existence.

Ozonized turpentine is much more germicidal, and owes this faculty to the presence of negative ozone.

Ulyptol. This compound consists of salicylic acid, phenic acid, and eucalyptus. It has an aromatic odor and burning taste, insoluble in water, but freely soluble in alcohol, chloroform, ether, glycerine, and ammonia. It has been found of utility rubbed up in vaseline and applied to wounds.

Uranium. (*Nitrate.*) Of utility in diabetes.

It has the most excellent property of sterilizing and even destroying the sugar fungus in the blood.

Dose: one-sixth to one-half grain every three hours.

Urethan. By its use we procure the most refreshing sleep, without arresting the secretions or creating a habit.

Dose: fifteen grains every hour or two if necessary.

Uric Acid Solvent. (*Ozonized.*) Most efficacious in dissolving uric acid concretions or formations, in both liver and kidneys. No remedy so effectually relieves a crippled kidney as this; it dissolves and washes the debris away, and renders the kidneys able to act as depurators of the blood. It relieves renal inadequacy by its solvent action, flushes the tubules and obviates the state of interstitial obstruction.

Dose: From a half to one teaspoonful added to water every two or three hours.

Corn smut or corn ergot, a fungus

Ustilago Maidis. growing on Indian corn.

Therapeutical uses.—Bears a strong resemblance to ergot in exciting uterine contractions; with ergot the contractions or pains are permanent, whereas, with *ustilago maidis* the pains are intermitting. It contains numerous alkaloids which are found in ergot, as prophylaxin, secelin, an acid and a fixed oil.

The best preparation is a fluid extract which should be administered in 30 to 60 drop doses.

A glucoside from pomegranate root bark, pumpkin seed, male fern, koussa, kamula, and other tænicides. *See directions.* This preparation is identical with the alkaloid pelleturin; put in extract of gentian and capsules, ready for administration.

Directions for use. The patient should take very little food for two days, and that should be of a fluid nature. On the evening of the second day, he should take a purgative (castor oil is best) of sufficient strength to cause an evacuation of the bowels, in the morning, after the castor oil given the previous evening has operated, and while still fasting, the patient should take seven or eight capsules along with another dose of castor oil or other purgative, follow that with another eight capsules to another dose of castor oil. The worm generally comes away within two hours after the second dose of capsules.

Mistletoe, a parasite growing on various

Viscum Album. trees.

Therapeutic use. Useful in uterine disease, dysentery, epilepsy, etc. It is a narcotic, antispasmodic and tonic.

Preparation and doses. 10 to 30 drops of the fluid extract added to warm tea every twenty minutes or less frequent in hemorrhage; in other affections every three hours.

It is a certain oxytocic and very efficacious in arresting post partum and other varieties of uterine hemorrhage.

Veratrum Viride. Norwood's tincture of veratrum viride is an unexcelled remedy internally to slow the action of the heart, lower temperature. A remedy of great power and precision in inflammation of the brain and lungs. Indicated in all fevers and inflammation.

Locally, the tincture is a germicide being useful in rheumatism, erysipelas, neuralgia.

Dose: One or two drops added to water every half hour, until pulse is 60, at which point it should be held by doses at longer intervals.

Verbascum. Either the fresh or dried leaves of the mullein plant.

Therapeutical uses. Of some value as a germicide in pulmonary tuberculosis, asthma, bronchitis. It increases assimilation, and allays cough.

Preparations and doses. Fluid extract doses 30 to 60 drops water.

Mullein oil, prepared by steeping the fresh mullein leaves in olive oil, submitting it to polarized sunlight, and before percolating adding peroxide of hydrogen. Of immense utility in earache and deafness. Instantly, as if by magic, gets rid of all purulent discharges which are so unpleasant and dangerous. Cures deafness, polypus, and neuralgia.

Wine of the Bark of the American Ash. Specially indicated in all types of the uric acid diathesis, rheumatism and gout in ladies. The chemical composition of this remedy is such—lime, colchicin, lithia, hydrastin, cocaine—that it is pre-eminently a drug for the ladies of the near future; extremely efficacious in membranous dysmenorrhea.

Dose: From a half to one teaspoonful, to be increased if necessary, every three hours, or more frequently if advisable.

The following is the formula for this preparation;

Warburg's Tincture. Aloes soc. one pound; rhubarb, angelica fruit, confection of democratis of each four ounces; elecampane, saffron, fennel, prepared chalk, of each two ounces; gentian, zedoary, cubebs, myrrh, camphor, agaric, of each one ounce. Digest the whole in five hundred ounces of alcohol for fourteen days, then percolate, after which ten ounces of quinine are added and dissolved.

Indicated in malaria.

Preparation and dose. First act well on the bowels, then administer from 30 to 60 drops up to a tablespoonful, and repeat in three hours. No water is to be given in the interim, as that is merely a pabulum to the germs being acted on.

Xanthoxylum. Prickly ash, a plant indigenous to the United States.

Therapeutical uses. A powerful diffusible stimulant, a useful remedy in debilitated states of the body.

Preparation and dose. Fluid extract 30 to 60 drops, as indicated.

Viburnum. Black haw, a nervine tonic, antispasmodic, exceedingly valuable as a uterine restorative, and an excellent remedy for habitual abortion.

Preparation and doses. Fluid extract 30 to 60 drops.

In addition to these New Remedies, there is a class of so-called concentrations which must never be confounded with the alkaloids and glucosides, the true active principles of drugs. These concentrated medicines or resinoids are prepared, for the most part, by evaporating, or distilling off, the alcohol of a saturated alcoholic tincture of the drug, until reduced nearly to the consistency of honey, and then gradually poured into about 100 parts of cold water (below 50° F.). When the precipitate has settled, the water is poured off, and the precipitate (resinoid) is washed twice with fresh portions of cold water, by decantation. The resinoid is then spread out in thin layers, and dried in a cool place free from dust.

They are thus really not much stronger than a solid extract in trituration, or an abstracta.

NAMES.	OBTAINED FROM	DOSE IN GRAINS.
Aconitin.....	Aconite Root.....	$\frac{1}{4}$ to $\frac{1}{2}$
Aletrin	Stalwort, <i>Aletris farinosa</i>	$\frac{1}{2}$ to 2
Alnuin	Smooth (Tag) Alder, <i>Alnus serrulatus</i>	2 to 10
Ampelopsin.....	Vir. Creeper, <i>Ampelopsis quinquefolia</i>	2 to 4
Apocynin.....	Indian Hemp, <i>Apocynum cannabinum</i>	$\frac{1}{2}$ to 1
Atropin	Belladonna, <i>Atropa Belladonna</i>	$\frac{1}{4}$ to $\frac{1}{2}$
Asclepin.....	Pleurisy Root, <i>Asclepias tuberosa</i>	2 to 4
Baptisin.....	Wild Indigo, <i>Baptisia tinctoria</i>	1 to 3
Barosmin.....	Buchu Leaves.....	2 to 4
Betin.....	Reet, <i>Beta vulgaris</i>	2 to 4
Bryonin	White Bryony, <i>Bryonia alba</i>	$\frac{1}{4}$ to 2
Caulophyllia.....	Blue Cohosh, <i>Caulophyllum thalictroides</i>	$\frac{1}{2}$ to 2
Ceanothin.....	Red-Root, <i>Ceanothus americanus</i>	1 to 2
Cerasein.....	Choke-Cherry, <i>Prunus virginiana</i> , L.....	2 to 10
Chelonin.....	Balmomy, <i>Chelone glabra</i>	1 to 2
Chimaphilin.....	Pipsissewa, <i>Chimaphila umbellata</i>	2 to 3
Chionanthin.....	Fringe Tree, <i>Chionanthus virginica</i>	1 to 3
Cimicifugin.....	Blake Snakeroot, <i>Cimicifuga racemosa</i>	$\frac{1}{2}$ to 2
Collinsonin.....	Stonewort, <i>Collinsonia canadensis</i>	2 to 4
Colocynthin.....	Colocynth, <i>Citrullus Colocynthis</i>	$\frac{1}{4}$ to 1
Cornin	Dogwood, <i>Cornus florida</i>	2 to 5

NAMES.	OBTAINED FROM	DOSE IN GRAINS.
Corydalin	Turkey Corn, <i>Dicentra canadensis</i>	1 to 3
Cypripedin.....	Yellow Lady's Slipper, <i>Cypripedium pubescens</i>	1 to 3
Digitalin	Digitalis, <i>Digitalis purpurea</i>	$\frac{1}{8}$ to $\frac{1}{2}$
Dioscorein.....	Wild Yam, <i>Dioscorea villosa</i>	1 to 4
Ergotin.....	Ergot.....	$\frac{1}{16}$ to $\frac{1}{2}$
Erythroxylin	Coca Leaves, <i>Erythroxylon Coca</i>	$\frac{1}{4}$ to 1
Euonymin.....	Wahoo, <i>Euonymus atropurpureus</i>	$\frac{1}{2}$ to 3
Eupatorin (perfo.)..	Boneset, <i>Eupatorium perfoliatum</i>	1 to 3
Eupatorin (purp.)..	Queen-of-the-Meadow, <i>Eupatorium purpureum</i>	1 to 4
Euphorbin.....	Flowering Spurge, <i>Euphorbia corollata</i> ...	$\frac{1}{4}$ to 2
Eupurpurin.....	Same as Eupatsrium (purpu).....	
Fraserin.....	Amer. Columba, <i>Frasera Walteri</i>	1 to 3
Gelsemin	Yellow Jasmine, <i>Gelsemium semper-virens</i>	$\frac{1}{8}$ to $\frac{1}{2}$
Geraniin	Cranesbill, <i>Geranium maculatum</i>	1 to 3
Gossipiin.....	Cotton Root, <i>Gossypium herbaceum</i>	1 to 5
Hamamelin.....	Witch Hazel, <i>Hamamelis virginica</i>	1 to 3
Helonin	Starwort, <i>Helonias dioica</i>	$\frac{1}{2}$ to 3
Hydrastin	Golden Seal, <i>Hydrastis canadensis</i>	1 to 2
Hyoscyamin.....	Hyoscyamus, <i>Hyoscyamus niger</i>	$\frac{1}{8}$ to 1
Inulin	Elecampane, <i>Inula Helenium</i>	1 to 3
Iris-in	Blue Flag, <i>Iris versicolor</i>	2 to 4
Jalapin.....	Jalap.....	1 to 3
Juglandin.....	Butternut, <i>Juglans cinerea</i>	2 to 5
Leontodin	Dandelion, <i>Taraxacum, dens-leonis</i>	2 to 4
Leptandrin.....	Culver's Root, <i>Leptandra virginica</i>	2 to 4
Lobelin.....	Lobelia, <i>Lobelia inflata</i>	$\frac{1}{4}$ to 3
Lupulin.....	Hops, <i>Humulus Lupulus</i>	1 to 2
Lycopin.....	Bugle-Weed, <i>Lycopus virginicus</i>	1 to 4
Macrotin	Same as Cimicifugin.....	
Menispermin.....	Yellow Parilla, <i>Menispermum canadense</i>	1 to 4
Myricin	Bayberry bark, <i>Myrica cerifera</i>	1 to 3
Phytolaccin	Poke Root, <i>Phytolacca decandra</i>	1 to 3
Populin.....	Poplar Bark, <i>Populus tremuloides</i>	2 to 4
Podophyllin.....	Podophyllum.....	$\frac{1}{4}$ to 2
Prunin.....	Wild Cherry, <i>Prunus (cerasus) serotina</i> ..	2 to 3
Ptelein.....	Wafer-Ash, <i>Ptelea trifoliata</i>	1 to 3
Rhein.....	Rhubarb.....	1 to 4
Rhusin.....	Smooth Sumach, <i>Rhus glabra</i>	1 to 2
Rumin.....	Yellow Dock, <i>Rumex crispus</i>	1 to 3
Sanguinarin.....	Bloodroot, <i>Sanguinaria canadensis</i>	1 to 3
Scutellarin.....	Sculleap, <i>Scutellaria lateriflora</i>	1 to 2
Senecin.....	Liferoot, <i>Senecio gracilis</i>	1 to 3
Smilacin.....	Sarsaparilla	2 to 5
Stillingin.....	Queen's-Root, <i>Stillingia sylvatica</i>	1 to 3
Trillin.....	Bethroot, <i>Trillium erectum</i>	2 to 4
Veratrin.....	American Hellebore <i>Veratrum viride</i>	$\frac{1}{8}$ to $\frac{1}{2}$
Viburnin.....	Cramp-Bark, <i>Viburnum opulus</i>	1 to 3
Viburnin (prun.)...	Black Haw, <i>Viburnum prunifolium</i>	1 to 3
Xanthoxylin.....	Prickly Ash, <i>Xanthoxylum fraxineum</i> ...	1 to 2

Concentrated or mother tinctures, so-called, are nothing more than fluid extracts obtained by repercolation.

The dose in all cases is the same as the fluid extract.

Specific green root tinctures are the utopian ideas of visionary, mercenary, grasping minds.

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
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
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
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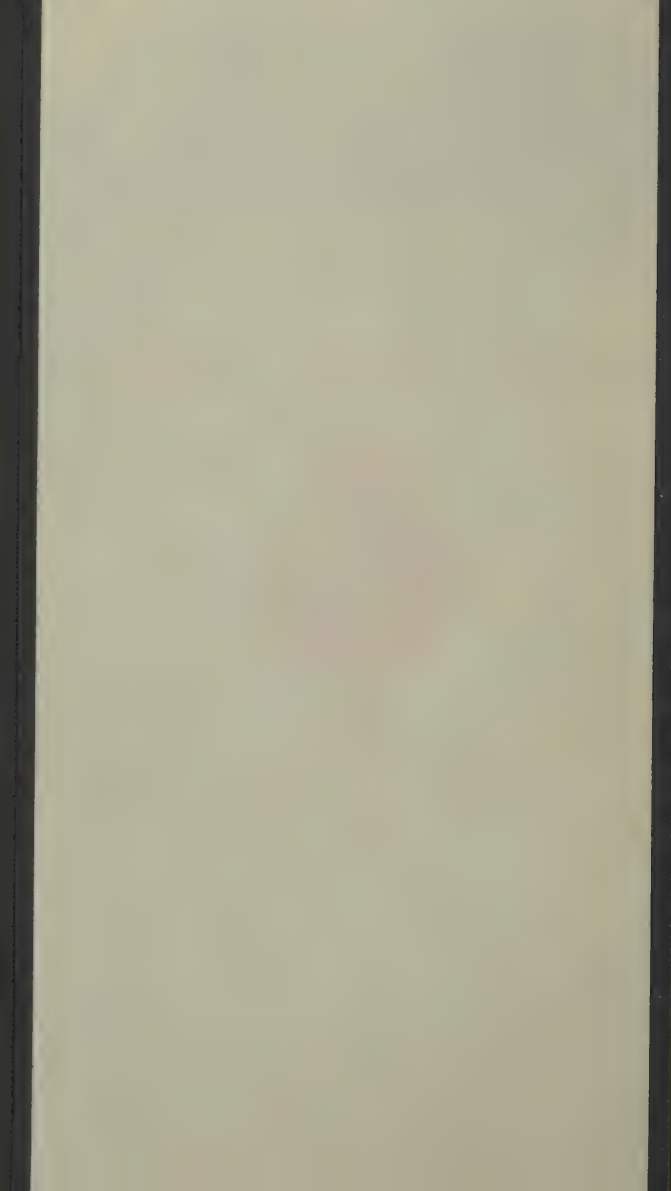
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May and June,
1897.



1850

H. L. ...

[Faint handwritten text]

I have pleasure in returning

Alc. Dec. - 2/21 - 10

Flavescens see if an
Growth of the Hides
Left of Dose - or
Tablets -

1/4 of Passiflora Incarnata
Suffraganea -

Ozonia Virginiana Stone
Crop 1/10 substance

~~the~~ Symplocaria

Jambolanum Putney
root - — 2 1/2

Cratium for X. V. 1/2
Dose -

